

Study on College Students' Sense of Learning Gain in Western China's Universities

Based on the Survey of Yunnan Province*

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Abstract—Through a survey of over 3000 college students in Western China, it is found that there are significant differences in learning identity, achievement evaluation, satisfaction degree and learning freedom for different sexes, grades, type of birth place and the identity of party membership. Learning achievement, interaction with teachers, types of birth place, the identity of party membership, learning motivation and learning habits are the main factors that affect the sense of learning gain of college students in Western China's universities.

Keywords—*Western China's universities; sense of learning gain; affecting factors*

I. INTRODUCTION

In the expression that "we should carry out poverty alleviation in a deep-going way and ensure that all people have more sense of achievement in the development of joint construction and sharing" in Chinese Communist Party's Report of the 19th National Congress of the Communist Party of China, it can be found that the sense of gain emphasizes the universality of benefits for all citizens. Nevertheless, the promotion of sense of gain is stratified. From the perspective of the imbalance of social and economic development in East, Central and Western China, the public's sense of gain in the Western China is a "bottom line", of which the upgrading space is broader than that of the East and Central China. Developing a sense of gain in the Western China can enhance the sense of universal gain in depth and breadth. At the same time, the development of education in the Western China is the key area of China's precision poverty alleviation and rural revitalization strategy. Supporting the development of universities in the Western China is also a key project supported by the central government for local colleges and universities over the years. Therefore, it is not only in line with national strategy to study the sense of educational gain of college students in the Western China, but also a rational choice for western universities to promote their own connotation construction and improve their educational level.

In the western academia, the number of studies on the topic of sense of gain is relatively small. In terms of the content, the

similar topics in the field of college students' "sense of educational gain" started earlier and became a certain system. In Britain, the concept of "learning experience" was put forward in 1960s. In 1991, the English man Lumsden (Ramsden) designed the college classroom experience scale from five aspects of education quality, teaching goal, homework, and academic evaluation and learning freedom. The higher education community in the United States emphasizes the development of teaching plans by measuring students' satisfaction with education, in which the representative ones are CSSQ scale of Alan Bates (Ellen L.Betz) and the National University Student Satisfaction Survey (NSSS) widely popularized by the US government since 1990s. From this, it can be found that in the west, the sense of higher education gain is related to learning experience and satisfaction with education.

Compared with western academia, the current research on the university students' sense of gain in China is in its infancy. And it is mainly concentrated in two major areas. One is the field of ideological and political education. Cheng Shibo and Xiong Jiansheng (2017) believe that "maintenance of stability" is the main discourse framework for college students' work, and the main path to build the students' sense of gain is to improve students' sense of safety and ideological and political awareness. Liu Jingwei, Hao Jiajing (2018) further pointed out that the generation of sense of gain in ideological and political education in colleges depends on three elements: emotion, thought and behavior, and that the transformation of teaching method of ideological and political education is put forward. Mei Yunbin, Jiang Xiaoyan (2018), thinks that students' subjective existence and lack of self-worth are the main reasons for the passivation of sense of educational gain. And it should be improved by showing subject respect, improving affinity and attractiveness. Fu Anling (2018) discussed the possibility and feasibility of introducing big data to the ideological and political education in colleges and universities. Second is private education and professional education areas. Through the investigation and analysis of private higher education students in China, Zhou Haitao, Zhang Mohan and Luo Wei (2016) reveal the relevant factors of students' sense of gain. It also points out the strategies to help poor students to improve their learning motivation and adjust their learning objectives, and improve students' educational satisfaction. Li Xiaolu, Hu Bing (2017)'s research emphasized the importance

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of upgrading vocational education level to people's sense of gain.

As a whole, there are plenty of topics in the western academic circle about the learning experience and the satisfaction of college students, but there is a difference between the conceptual consistency and the sense of gain. Nevertheless, it can provide ideas and tools for measuring and evaluating the university students' sense of gain in China. Although there are a number of relevant researches in China, the fields and scopes of these studies are narrow, and the number of empirical and quantitative studies is relatively small. Therefore, a local and measurable study on college students' sense of learning gain can form a powerful complement to the existing topics on higher education's sense of gain. At the same time, it can also provide an advantageous basis for the relevant departments to understand the learning of college students. At the same time, the study suggests that college students' sense of learning gain is a kind of comprehensive psychological experience, which is mainly composed of four dimensions: learning identity, satisfaction degree, result evaluation and learning freedom. And the main factors affecting college students' sense of learning gain are gender, types of origin of student, Party membership, learning motivation, learning habits, learning achievement and interaction with teachers.

II. RESEARCH DESIGN

Systematic sampling investigation is the method used to collect data in the research.

The survey time was from March 23, 2018 to May 15, 2018. The respondents were 13 state-owned universities, such as Yunnan University, Yunnan Normal University, Yunnan Minzu University, Yunnan Agricultural University, Southwest Forestry University, Kunming University of Science and Technology, Kunming Medical University, Yunnan Arts University, Dali University, Kunming University, Qujing Normal University, Yuxi Normal University and Wenshan University. The subjects were freshmen, sophomores, juniors and seniors. A total of 3,236 sample data were obtained, including 2,864 valid questionnaires, with the 88.50% effective rate of questionnaire.

From the distribution of samples, boys accounted for 41.87% and girls 58.03%; students from rural areas accounted for 45.39%, and students from towns accounted for 54.61%; freshmen for 26.27%, sophomores for 31.56%, juniors for 23.52% and seniors for 18.65%; 19.72% of students are party member and 80.28% are non-party members.

Combined with the understanding of the study on college students' sense of learning gain at home and abroad, the study used the self-designed "Scale of Yunnan Province College Students' Sense of Learning Gain", with Likert scoring method to collect data. The assignment is from 1 to 5 points. With the method of positive evaluation, the higher score represents the stronger sense of gain from a learning strategy. The entire scale consists of 25 projects. The principal component analysis was carried out by the statistical software SPSS13.0 for each project, and it is found in the results of Bartlett spherical test that KMO value was $0.87 > 0.7$, indicating that the result of

principal component analysis is valid. A total of 4 common factors with a characteristic value greater than 1 were extracted. In all 25 items, there are 6 factors related to students' identity content of learning, curriculum interest and other factors in the learning process. Therefore, they are named as learning identity and expressed as S1. There are 9 factors close to students' satisfaction degree with professional development, school environment, teaching staff, teachers teaching quality and employment prospects. Therefore, they are named as satisfaction degree and expressed as S2; there are 5 factors related to the evaluation system of academic achievement, competition and scientific research. Therefore, they are named as outcome evaluation and expressed as S3. There are 5 factors related to students' self-study, the diversity of evaluation ways, the situation in the second class, the obtained help and degree of freedom. Therefore, they are named as the degree of learning freedom and expressed as S4. The internal consistency test of the scale showed that the total reliability was 0.89, and the learning identification, satisfaction degree, achievement evaluation and learning freedom reliability were 0.84, 0.79, 0.82 and 0.91 respectively. It shows that the scale and dimensions are suitable for group survey, and its consistency level is high. It can be used as an effective tool to measure college students' sense of learning gain. "Table I"

TABLE I. ANALYSIS ON MAIN COMPONENTS OF COLLEGE STUDENTS' SENSE OF LEARNING GAIN

Common Factor	Characteristic Value	Variance (%)	Cumulative Variance (%)	Cronbach's α Coefficient
Overall sense of gain	——	——	——	0.89
S1 learning identity	5.873	21.81	21.81	0.84
S2 satisfaction degree	4.805	17.46	39.27	0.79
S3 results assessment	3.590	15.53	54.8	0.82
S4 learning freedom degree	3.772	14.71	69.51	0.91

III. DISCUSSION AND ANALYSIS

From the evaluation of college students' sense of learning gain, the mean value of overall sense of gain is 3.56; and the scores of learning identity, satisfaction degree, result evaluation and learning freedom were 3.25, 3.61, 3.44 and 3.92 respectively. It indicates that the students' sense of learning gain is above the average level. A further analysis can be done through the independent sample test of students' basic statistical variables. "Table II"

First, in terms of gender, in the four common factors, there is a significant difference in the college students' sense of gain among different gender groups except for learning freedom. The difference of satisfactions was very significant ($p < 0.01$), and learning identification and achievement evaluation were more significant ($p < 0.05$). Male students' evaluation of learning achievement (3.54) was slightly higher than that of female students (3.34). It shows that male students are more satisfied with the current student evaluation system in colleges

and universities, which can also be explained that female students value the "results" of learning more. At the same time, female students' learning identity (3.31) and satisfaction (3.93) were higher than male students (3.19, 3.28), especially the higher mean value of satisfaction degree. It shows that female

students have more learning motivation and interest than boys, and are more satisfied with the construction of hardware and software environment. At the same time, female students are more optimistic about their professional and employment prospects.

TABLE II. TEST OF MEAN VALUES OF SENSE OF GAIN OF DIFFERENT STUDENT GROUPS

Features Of Groups	Variables	Learning Identity	Satisfaction Degree	Outcome Evaluation	Learning Freedom
Gender	Male	3.19±0.73	3.28±0.78	3.54±0.65	3.97±0.47
	Female	3.31±0.79	3.93±0.71	3.34±0.74	3.86±0.58
	t	12.65*	11.75**	-3.64*	1.27
Types of origin of student	Country	3.41±0.72	3.69±0.79	3.45±0.62	3.93±0.53
	Town	3.09±0.71	3.53±0.77	3.43±0.60	3.91±0.55
	t	2.14*	2.31*	9.65**	11.66**
Politics status	Party member	3.27±0.70	3.66±0.74	3.46±0.64	3.94±0.52
	Non party member	3.24±0.69	3.58±0.72	3.44±0.66	3.89±0.51
	t	-1.16	-1.03	-8.67**	-7.64**
Grades	Lower grades (Freshman and sophomore)	3.38±0.78	3.66±0.73	3.38±0.68	3.86±0.51
	Senior grades (Junior and senior)	3.12±0.81	3.57±0.71	3.49±0.69	3.98±0.48
	t	4.86**	6.27**	7.88**	8.64**

^a Note: * : p<0.05 ; ** : p<0.01

Second, in terms of types of origin of student, the four common factors have reached a significant level. Among them, the difference between achievement evaluation and learning freedom is very remarkable ($p<0.01$), and that of learning identification and satisfaction degree is relatively remarkable ($p<0.05$). Students from rural areas were slightly higher than those from cities and towns (3.09, 3.53, 3.43, 3.91) in learning identification (3.41), satisfaction degree (3.69), achievement evaluation (3.45) and learning freedom (3.93). This trend can be explained by "the uneven development of urban and rural areas in China, and the universities in an urban area are more attractive to the students from the rural areas. Thus they have greater learning motivation".

Third, in terms of the politics status, two indicators of achievement evaluation and learning freedom have reached a significant level ($p<0.01$). Students with Party membership are slightly higher than non party members (3.44, 3.89) in the results evaluation (3.46) and learning freedom (3.94). This phenomenon shows that students with Party membership have stronger leading and exemplary role in learning, and they have stronger learning autonomy and consciousness.

Fourth, in terms of grades, the tests of four indicators all reached significant levels, and the differences were very significant ($p<0.01$). On the two indicators of learning identity and satisfaction degree, junior students (3.38, 3.66) were slightly higher than those of senior students (3.12, 3.57). On the two indicators of achievement evaluation and learning freedom, senior students (3.49, 3.98) were slightly higher than those of lower grades (3.38, 3.86). This trend indicates that the lower grade students continue their good learning habits since high school, and are higher in learning autonomy and degree of satisfaction to schools than in senior students. The senior students adapt to the university evaluation system, and then pay more attention to the results of evaluation and pursue a freer learning atmosphere.

In order to further explore the influencing factors of college students' sense of learning gain in Western China, the research included 7 variables into the regression model: gender, types of origin of student, Party membership, learning motivation, learning habits, academic achievement and interaction with teachers.

TABLE III. REGRESSION MODEL OF INFLUENCE FACTORS FOR SENSE OF GAIN OF STUDENTS IN SOUTHWEST UNIVERSITIES

Variables	B	Standard Error	Beta	t
Intercept	0.558	0.071		22.637
Gender	-0.245	0.032	-0.227	-31.44
Types of origin of student	0.297		0.188*	1.015*
Political status (the reference group is non party member)	0.264	0.038	0.217**	1.421**
Learning motivation (1-5 scores, interval level of measure)	0.171	0.021	0.153*	21.152**
Study habits (1-5 scores, interval level of measure)	0.051	0.052	0.031*	29.156*
School records	1.518	0.038	1.328**	12.574**
Interaction with teachers (1-5 scores, interval level of measure)	0.306	0.049	0.254**	51.202**
F test value	6226.0472**			
DW	1.862			
R2 after adjusting	0.394			

a. Note: * $p<0.05$, ** $p<0.01$, the gender reference group was female students; the reference group of types of origin of student was the students from towns; the politics status's reference group was non Party member.

It can be seen from "Table III" that the correlation coefficient of 7 independent variables for sense of learning gain is 0.628, and the adjusted goodness of fit is $R^2=0.394$, which shows that the model can explain the variation amount of total sense of learning gain is 39.4%, close to 40%. In large samples, 40% of the variation amount is acceptable. At the same time, the Durbin-Waston test value was 1.862, close to 2, which shows that there is no autoregression among variables in

the model. The regression equation can be obtained after normalization of the regression coefficient.

The sense of learning gain = $0.188 * \text{origin of student} + 0.217 * \text{political status} + 0.153 * \text{learning motivation} + 0.031 * \text{learning habits} + 1.328 * \text{academic achievement} + 0.254 * \text{interaction with teachers}$.

The academic record is the primary factor affecting students' sense of learning gain and the regression coefficient is 1.328. It shows that each student's score increases by 1 point, and the sense of learning gain improves 1.328 units. Interaction with teachers, political status, types of origins of students and learning motivation also have strong influence on students' sense of gain. Among them, the regression coefficient of interaction with teachers is 0.254, indicating that the positive interaction between students and teachers increases by 1 unit, and the sense of learning gain increases by 0.254 units. The regression coefficient of political status is 0.217, indicating that party members' sense of learning gain is 0.217 times that of non party members; the regression coefficient of types of origins of students is 0.188, indicating that the sense of learning gain from rural students is 1.88 times that of rural students. The regression coefficient of learning motivation is 0.153, which indicates that every 1 unit is increased in learning motivation, and 0.153 units is increased in sense of learning gain. Learning habits have the least influence on the sense of learning gain. When learning habits are increased by 1 unit, the sense of learning gain is increased by only 0.031 units. The influence of gender on sense of gain is not statistically significant.

IV. CONCLUSION

By measuring the students' sense of learning gain in Western China's colleges, we can draw the following conclusions:

A. Academic Achievement Is the Primary Factor That Affects the College Students' Sense of Learning Gain

There is a significant positive correlation between academic achievements. With the improvement of academic achievement, students' sense of learning gain is improved in an all-round way. And the two factors are mutually causation. This trend can be explained by the theory of "self-efficacy". From the age structure of college students, "95 after" is the main group, who are more likely to accept positive incentives than negative ones. The improvement of achievement helps enhance their sense of learning gain. The enlightenment to universities in Western China is as follows: it is necessary to adopt different evaluation systems to guide students, teach students in accordance with their aptitude, and fully mobilize their subjective initiative.

B. The Interaction with Teachers Is Another Important Factor That Affects Students' Sense of Learning Gain

Interactive classroom and experiential teaching are the fields in which China's higher education is currently committed to reform. However, in terms of concrete practice, inculcation education has always been the mainstream way of teaching in specific teaching courses. Therefore, changing the

traditional teaching methods, improving the classroom interaction between teachers and students and the frequency of private interaction will help improve the students' learning experience and improve their sense of learning.

C. Political Status and Types Origins of Student Are Also Important Factors that Affect Students' Sense of Learning Gain

It is found in the study that students with Party membership had a stronger sense of learning gain than non party members. Students from rural areas have a higher sense of learning gain than those from urban areas. The implications of this trend are: It is necessary to give full play to the role of reference group of Party members to drive the learning enthusiasm of non party members. At the same time, we should strengthen communication and exchange between students from rural areas and from cities, giving more encouragement to urban students.

D. Learning Motivation and Learning Habits Also Have a Significant Impact on Students' Sense of Learning Gain

The influence of learning motivation is strong, and that of learning habits is weak. The colleges in Western China should actively guide and nurture the learning motivation of college students, and create the correct values. And there are strict requirements for learning habits in order to change the "loose" campus lifestyle of college students.

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