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Scholarship of Teaching and Learning Based on Learning Experiences and Rewards of College Students: An Investigation From Guangxi, China

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Abstract
Learning experiences of college students are the main index for representing scholarship learned by college students which include family backgrounds, supporting campus environment, individual efforts of the students themselves, and social communication, utilization of university resources, study activities, course work and learning rewards. Therein it is the supporting campus environment, study activities, social communication and utilization of university resources that have important influence on learning rewards of college students. For the purpose of analyzing scholarship taught by teachers from the scholarship learned by students, first, we should carry out training on teachers in accordance with scholarship activities and purports of students to fit for the interests and demands thereof; secondly, we should lay stress on construction of campus environment to promote the combination of scholarship both learned by students and taught by teachers, and simultaneously, effectively taking advantage of utilization and development of university resources, to serve for the development of teachers and students all the better; lastly, either scholarship learned by students or taught by teachers needs joint efforts of multiple subjects asthe teachers, students and universities.

Key words: College students; Learning experiences; Rewards; Scholarship of teaching; Training on teachers

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INTRODUCATION
Scholarship of teaching (SoT) is a scholastic activity that teachers pass on knowledge and students gain it, which is not a simple teaching activity happened in classroom, but an activity that is extended with less limitation of space and time, thus Shulman has developed it into the scholarship of teaching and learning, and defines it as "a practice that carrying out scholastic research in learners' learning and making public the results just to improve teachers' teaching". All the discussion on teachers' teaching, therefore, cannot be done without learning activities. It is the main route for current teachers' training that we do research in SoT of university teachers to improve university teachers' training through studying in scholarship of learning (SoT) of college students. This article, from the aspects of learning experiences and rewards of college students, tries to construct a model of SoL for them, discovers basic features and status quo thereof, analyzes SoT of university teachers and puts forward several measures for university teachers' training.

1. LITERATURE REVIEW
Learning experiences of college students are important substance in higher education policy agenda in Western countries. It is

> a cognition and an experience of students about interaction between themselves and other human beings, things and objects in universities, and specifically speaking, also an experience and its rewards that college students proceed in and outside classroom during their graduate periods. (Z. Y. Zhou & Zhou, 2007)

which stresses on students' behaviors in various activities related with learning, pays attention to the investigations of students' learning process, for example, communication with teachers, cooperative learning with classmates, writing experiences, expected results of learning, etc. (Gnoyea, Kish, Kuh, Muthiah, & Thomas, 2003), and simultaneously concerns their learning rewards, i.e., students can prove themselves obtain deserved abilities in these aspects as knowledge, skills and values after having completed a series of courses or training plans (Shi & Wen, 2012) .

Being focused on elements impeding students' development in many ways, foreign literatures relevant to college students' learning experiences, after having comprehensively analyzed learning experience and rewards of college students, conclude that learning experiences thereof include internal elements as individual background, effort extent, utilization of opportunities, etc., also external elements as university environment, organizational features, etc. and process elements as contact between teachers and students, cooperation of students, learning feedback, etc.. (Ascarella, 1985; Chickering & Gamson, 1987; Davis & Murrell, 1993; Astin., 1993; Hu & Kuh, 2003)

From the year of 2004 to 2014, Chinese research literatures on college students' learning experience are as follows.

1.1 Theoretical Construction and Analysis on College Students' Learning Experiences

Shi and Wen (2012) consider that learning experiences thereof can follow into external adaptive elements, internal driven elements and comprehensive elements. Shi and Lin (2007) explore in learning process pattern of Chinses college students, and think that learning process is similar to decreasing process of Markov chain. Tang and Song (2010) put forward a new learning model for college students, and by this, hope to enhance learning experiences thereof and improve teaching qualities of universities. Lu et al. (2013) construct an employment experience model therefor containing academic participation, intelligence development, educational experience, and perception of classroom learning environment and campus atmosphere by investigating in learning experience of students in Xi'an Jiaotong University.

Xie et al. (2014), taking "initial condition—learning process—reward evaluation" as analytical framework, have discussed the differences between learning experiences of college students and other factors as entrance channels, subject areas, gender, etc.. Guo and Shi (2013) have probed into the relationship between course learning evaluation and learning of different college students. Tang and Song (2010) have summarized learning pattern of college students. Wu (2011) and others have analyzed the influence of learning experiences of freshmen and their adaption to the universities on learning results. Zhou (2012), Huang (2011), and Zhang and Song (2014) have respectively investigated learning status quo of college students majored in sport pedogogics in Gansu province, Shanghai and Guangzhou.

1.2 Investigation in Relevant Elements to Influence Learning Experiences and Rewards (Grades) of College Students

Wang (2014) has investigated the relationship between learning burnout in learning experiences and professional commitment and study pressure. Li (2014), taking four comprehensive universities in Xi'an as examples, has specially investigated the influence of utilizaiton of library on college students. Bai and Mao (2014) have investigated relevant elements of forestry universities in Nanjing to influence the learning of college students. Bai (2013), by making use of the data collected by students' learning experiences questionnaires and adopting the method of path analysis in structural equations, has constructed a model for analyzing the influence of learning experience on learning rewards, and discovers that supporting campus environment, study activities, utilization of university resourses and social communication can produce positive influence on learning rewards. Wang (2009), taking learning input of college students as core conception, under the analytical framework of university educational influence model, has built up a model of cause-and-effect relationship between peripheral conditions & internal process of learning and the learning results, and has investigated in the influence of each element and its sub-dimension in the model on the learning rewards of different types of students based on the data of NSSE-China. Wu et al. (2012) have analyzed the effect of learning experiences of freshmen and their adaption to the university on the grades. Li et al. (2004) have explored in the factors to influence the exam results of college students and consider that the results are decided by individual's effort.

1.3 Evaluation of Teaching Quality in the Light of Learning Experiences of College Students

Li (2011) has analyzed that effective course learning experience evaluation is related to learning input. Shi (2012) has investigated learning effective evaluation mechanism of students in research universities. Liu et al. (2011) has investigated learning status quo of students in four agricultural and forestry institutions of higher education and expose the issues recently existing in education and teaching in these institutions. Xu (2006), having summed up experience of European and American countries to depict learning results from the perspective

of students, suggests that Chinese should convey the training objectives and standards of college students from the point of view of "learning" rather than "teaching", and thus obtain innovation in teaching management and evaluation of universities. Mai (2014), from the viewpoint of learning experiences, has investigated teaching quality of an innovation experimental class in one university.

Aforesaid researches, by analyzing learning status quo, experience and its relevant elements, and rewards of college students, have an important directive function in Chinese higher education reformation, but haven't discussed SoT from SoL. This article tries to investigate SoL of college students from their learning experiences and rewards, and simultaneously, puts forward several suggestions in how SoT improve SoL, and then explore in corresponding measures for university teachers' training.

2. RESEARCH METHOD AND PROCESS

2.1 Choosing of Research Method

This article, comprehensively analyzing domestic and foreign researches about learning experiences of college students, extracts relevant elements therein, chooses College Student Experiences Questionnaire (CSEQ) compiled by Indiana university as the basic questionnaire and makes partial adjustment in the process of translating the questionnaire in combination of the reality of learning experiences of local college students.

Ajusted CSEQ contains four parts—background information, school activities, perception of campus environment and self-evaluation of learning rewards of students. The first one includes gender, subject, family background, etc. and has 12 questions in accordance with different background information about students. The second is the main part, which consists of 101 questions in 17 aspects as library learning, writing experiences, computer or information technology, course study, artistic experiences, community organizations, techers' experiences, utilizaiton of campus facilities, individual efforts, association with classmates, scientific and quantitative experiments, learning life, conversation topics, contents of conversation, reading and writing experiences, perception of universities, university environment and interpersonal relations. Except for 5 questions in reading and writing experiences, all other questions adopt the method of four-point Likert scale, i.e., "frequent", "often", "occasional" and "never"; university environment contains 12 questions on academic, interpersonal and career environment, which is specifically related with affection degrees for university and the perception of university (or school), the latter of which can be seperated into 7 degrees from "highly valued" to "least valued". And the last one, learning rewards include grade points and other rewards assessed by students, the latter of which have 24 questions on four aspects as knowledge & skills, individual development, career preparation and general education and are calculated by four measures as "very many", "many", "some" and "a few" according to reward degrees.

2.2 Distribution and Reclaim of Questionnaires

After 31 questionnaires distributed in October of 2013 in advance having been pre-investigated, the questionnaires have been adjusted again in accordance with the data for pre-investigation. And during Feburary and July of 2014, we have conducted investigation for the students of all the majors in one project 211 universities in Guangxi province, totally distributed 700 questionnaires and reclaimed 637 effective ones.

2.3 Report on Reliability and Validity of Questionnaires

It is generally believed that if Cronbach's alpha is above 0.7, the scale is measuring the same event and is qualified. If above 0.8, it means that reliability of questionnaires is good. The general reliability of adjusted CSEQ is 0.843, which indicates that the general reliability is good. Then we adopt criterion to calculate construct validity and criterion validity. The study puts forward the following hypothesis: students with good learning results (grade points) have positive attitude and rich experience in learning, and vice versa. The questionnaires expose that there exist differences among grade points, learning attitudes and rewards, therefore, we can do research in these three criteria to calculate the construct validity. After calculating, we discover that the students with high grade points and those with low ones have evident differences in learning experiences, which means the hypothesis is tested and verified, and the construct validity is good. And then, taking learning experiences as another criterion, we continue to make the correlation analysis and find that the learning experiences are positively correlated with rewards, which indicate that the construct validity of adjusted questionnaires is good. Lastly, we calculate the construct validity by making use of Cronbach's alpha and obtain that the construct validity is 0.703 and the split-half reliability is 0.740.

3. ANALYSIS ON RESEARCH DATA

This study defines learning experiences as independent variable and learning rewards as the dependent variable. According to distribution of topics in the questionnaires, the former of which is comprised of 7 elements as family backgrounds, supporting campus environment, individual effort, social communication, university resources, study activities and in-class learning, and the latter of which is learning rewards of college students. In the part of dependent variable, family backgrounds include the receiving of higher education of parents, the tuition

assistance by family, the hours of part-time jobs inside and outside universities and the influence of part-time job upon learning; supporting campus environment consists of academic, interpersonal and career environment; individual effort includes reading and writing amounts, credits of elective courses and learning time; social communication contains contacting experience with teachers, club activities, association with classmates, individual experiences, conversation contents, artistic activities; university resources include campus facilities and computers; study activities include utilization of libraries, writing experiences, application of computers, experience in scientific experiments; and in-class learning includes course study and conversation information. Learning rewards consist of self-evaluation of rewards and exam results.

3.1 Basic Status Quo of Learning Experiences of College Students

In the aspect of subject distribution, we have investigated 12 discipline categories as philosophy, economics, management, jurisprudence, pedagogy, history, science, technology, agronomy, medical science, art and literature, and just in view of convenience of statistics, these categories can be incorporated into 2 categories as literature & history and finance & economics category (LHFE category), and science & engineering and agoronomy & medical category (SEAM category). Among the objects accepting investigation, the students majored in the former category account for 34.5%, and the others majored in the latter category account for 65.5%. In the aspect of gender distribution, boys account for 41.8%, girls account for 58.2%. And in the aspect of grade distribution, the freshman and sophomore account for 37.2%, junior and senior account for 62.8%.

Receiving education status of parents of the subjects is: 65.1% thereof haven't received any higher education, only mother receiving higher education accounts for 2.2%, only father receiving higher education accounts for 12%, and 17.8% thereof have received higher education, which indicates that most of subjects haven't good family educational background.

As for grade points (GA), the distribution is as follows:

Table 1
Grade Points of College Students

GA	Percentage (PCT)	GA	PCT	GA	PCT	GA	PCT	GA	PCT
4.0-5.0	15.1%	3.5-3.99	23.9%	3.0-3.49	34.9%	2.0-2.99	22.5%	Below 2.0	3.6%

Table 1 shows that the grade points of college students follow the normal distribution. Related with the receiving situation of parents of the subjects, it can conclude that family education have not made great impact on GA, and taking further analysis, the GA thereof may be the results of comprehensive influences by such elements as individual effort, study activities and campus resources.

3.2 Features of Learning Experiences of College Students

3.2.1 Gender Discrepancy in Learning Experiences of College Students

After standardizing all the data, we have conducted students' gender *T*-test, and the results in Table 2.

Table 2
***T*-Test for Learning Experiences of College Students**

	Gender	*M*	*SD*	*t*
Family Background (FB)	Male	1.88	1.30	-0.34
	Female	1.91	1.32	
Study Activities (SA)	Male	78.16	19.78	2.94**
	Female	73.88	15.26	
In-class Learning (IL)	Male	39.28	7.19	1.76
	Female	38.29	6.88	
University Resources (UR)	Male	14.86	3.49	2.35*
	Female	14.20	3.41	
Social Communication (SC)	Male	97.88	19.71	2.32*
	Female	94.36	18.15	
Individual Efforts (IE)	Male	14.79	4.05	-0.09
	Female	14.81	3.25	
Campus Environment (CE)	Male	29.46	7.62	0.25
	Female	29.32	7.15	
Evaluation of Rewards (ER)	Male	53.30	11.62	3.05**
	Female	50.47	11.40	
Knowledge & Skills (KS)	Male	16.45	4.06	2.99**
	Female	15.45	4.21	
Individual Development (ID)	Male	9.65	3.46	0.89
	Female	9.40	3.51	
Career Preparation (CP)	Male	11.89	2.90	0.09
	Female	11.87	3.05	
General Education (GE)	Male	15.31	5.24	3.85***
	Female	13.75	4.68	
University Rewards (Including GA) (UR)	Male	55.93	11.77	3.07**
	Female	53.08	11.29	

Note. *, p=.05; **, p=.01;*** , p=.001

To be continued

Table 2 shows that there exists obvious discrepancy of gender in the independent variable as study activities, university resources and social communication, and the scores are higher in male than in female. The dependent variable, university rewards also has discrepancy in gender, and therein, the gender discrepancy in the knowlege & skills and general education are salient (p<.001), which indicates the same as the independent variable.

3.2.2 Disciplinary Discrepancy in Learning Experiences of College Students

Table 3
***T*-Test for Learning Experiences of College Students**

	Disciplinary	*M*	*SD*	*t*
FB	LHFE category	2.24	1.44	4.56***
	SEAM category	1.72	1.20	
SA	LHFE category	70.74	14.25	-5.61***
	SEAM category	78.13	18.34	
IL	LHFE category	38.03	7.47	-1.65
	SEAM category	39.00	6.75	
UR	LHFE category	13.81	3.57	-3.54***
	SEAM category	14.82	3.34	
SC	LHFE category	91.95	18.11	-3.77***
	SEAM category	97.83	18.97	
IE	LHFE category	14.67	3.73	-0.58
	SEAM category	14.85	3.52	
CE	LHFE category	29.31	7.07	-0.02
	SEAM category	29.32	7.54	
ER	LHFE category	51.43	12.04	-0.22
	SEAM category	51.64	11.36	
KS	LHFE category	15.89	4.85	0.23
	SEAM category	15.80	3.79	
ID	LHFE category	9.60	3.38	0.64
	SEAM category	9.42	3.55	
CP	LHFE category	12.52	3.32	4.08***
	SEAM category	11.52	2.75	
GE	LHFE category	13.42	4.06	-3.94***
	SEAM category	14.91	5.31	
UR	LHFE category	54.18	12.06	0.00
	SEAM category	54.19	11.35	

Note. ***, p=.001

It is indicated in Table 3 that there exists disciplinary discrepancy (p<.001) in the independent variable as family background, study activities, university resources, social communication. Disciplinary discrepancy of career preparation and general education in the dependent variable (university rewards) is marked (p<.001), and in family background and career preparation, students majored in LHFE categories have got higher scores than those majored in SEAM category, while in university resources, social communication and general education, the situation is just the opposite.

3.3 Analysis on Grade Variance of Learning Experiences of College Students

After analyzing on variance of disciplines, it discovers that study activities, social communication, utilization of university resources, and university rewards all exist obvious discrepancy in disciplines. The analysis on grade variance is as described in Table 4.

Table 4
Grade Variance of Learning Experiences of College Students

	Grade	*M*	*SD*	*F*
Study activities	Freshman	116.50	11.68	5.35***
	Sophomore	110.07	23.39	
	Junior	116.85	22.00	
	Senior	96.33	11.55	
University rewards	Freshman	51.00	4.08	6.26***
	Sophomore	49.16	10.82	
	Junior	53.03	11.88	
	Senior	45.67	5.51	

Note. *, p=.05; **, p=.01; ***, p=.001

From Table 4, it can get that study the activities and university rewards of the college students exist grade discrepancy, for study activities, the freshmen and juniors have higher scores than the sophomores and seniors. The rewards still exist the grade discrepancy, in which juniors obtain the highest scores, and seniors, the lowest.

3.4 Correlation Analysis on Learning Experiences and Rewards of College Students

After having conducted Pearson's correlation test, we find the correlation between each dimension is as follows:

Table 5
Correlation Analysis on Learning Experiences of College Students

	FB	SA	IL	UR	SC	IE	CE	KS	ID	CP	GE	UR
FB	-											
SA	-0.02	-										
IL	0.02	0.66***	-									
UR	0.05	0.57***	0.56***	-								
SC	0.00	0.77***	0.70***	0.72***	-							
IE	0.02	0.20***	0.23***	0.16***	0.18***	-						
CE	0.03	0.10**	0.10*	0.16***	0.10**	0.16***	-					
KS	0.04	0.31***	0.39***	0.23***	0.30***	0.15***	0.13***	-				
ID	-0.01	0.04	0.19	-0.07	-0.01	0.16***	0.09*	0.47***	-			
CP	0.07	0.05	0.29***	0.09*	0.10*	0.11**	0.12**	0.61***	0.57***	-		
GE	-0.06	0.67***	0.44***	0.38***	0.59***	0.12**	0.11**	0.41***	0.25***	0.16***	-	
UR	0.01	0.44***	0.47***	0.26***	0.40***	0.19***	0.15***	0.84***	0.70***	0.71***	0.70***	-

Note. *, p=.05; **, p=.01; ***, p=.001

Table 5 shows that there is no relevant relationship between family background and university rewards; there exists positive correlation (weak positive correlation, correlation coefficient<0.3, p<.001) between university resources, campus environment, individual effort and university rewards; there exists medium positive correlation (correlation coefficient<0.3, p<.001) between study activities, in-class learning, social communication and university rewards. If dividing university rewards into four dimensions as knowledge & skills, individual development, career preparation and general education, then there exists positive correlation between study activities, in-class learning, university resources, social communication, knowledge & skills and general education; there exists positive correlation between campus environment, individual effort and individual development; and there still exists positive correlation between university resources, social communication, individual effort, campus environment and career preparation.

3.5 Analysis on Multiple Regressions

The regression analysis on the influence of family background, study activities, in-class learning, university resources, social communication, individual effort and campus environment upon university rewards is as shown in Table 6.

Table 6
Regression Analysis on the Influence of Variables Upon University Rewards

Variable	University rewards(Y)(N=637)			
	β	ΔR^2	Accumulation R^2	F
FB	0.02			
SA	0.20***			
IL	0.31***			
UR	-0.13*	0.26	0.28	31.67***
SC	0.10			
IE	0.06			
CE	0.10**			

Note. *, p=.05 **, p=.01; ***, p=.001

Table 6 indicates that the contribution ratio of variance of family background, study activities, in-class learning, university resources, social communication, individual effort and campus environment upon university rewards is 28%. After the multiple liner regression overall test, we get F=31.67, p<.001, which shows that the regression coefficient of at least one independent variable in seven predictive variables is notable. And study activities, in-class learning and campus environment have positive influence upon university rewards.

4. DISCUSSION

The investigation analyzes learning experiences of college students from multiple aspects such as campus environment, individual effort, social communication, university resources, study activities, learning rewards, grade points, etc..

From the status quo of learning experiences of students, the investigation refers to 12 disciplinary categories, which basically reflect characteristics of students in project 211 universities. The results of *t*-test, variance analysis, correlation analysis and multiple regression indicate that family background including educational levels of parents has not great influence upon learning rewards of college students, which suggests that one hand, family background has little influence on the learning results of college students, and their subjective initiatives, on the other hand, can make up the adverse effect of bad family background.

Gender *T*-test of learning experiences of college students illustrates that gender discrepancy is salient in study activities, university resources and social communication, and boys get higher scores than girls. In the questionnaire, study activities include utilization of library materials, writing experiences, application of computers and scientific quantities experiments, while social communication contains contacting experiences with teachers, participation in clubs, association with classmates, individual experiences, conversation topics with others, artistic and musical experience. University resources comprise the application of campus facilities and computers. The salient discrepancy as mentioned in the aforesaid aspects shows boys have wider interest than girls do, like taking part in various activities, make use various facilities and resources, enjoy contact with more teachers and classmates in that they can obtain full development in universities. Girls are more concentrated on activities relevant with in-class learning, and have less interest in other areas such as study activities, university resources, social communication, etc., which indicates that girls can be possible to acquire comprehensive development after extending social communication and developing wide learning interests.

Disciplinary discrepancy analysis of learning experiences and rewards of college students exposes that students majored in LHFE category have higher scores in family background and career preparation than those majored in SEAM category who have higher scores in study activities, university resources and social communication. The students majored in LHFE category have higher scores in career preparation, but lower scores in general education in that those students with less course tasks have more time to engage into club work and part-time jobs, thus obtain reasonable enough development in career preparation, while students majored in SEAM category, in view of the reqirements of course study, can make more use of resources in universities and frequently communicate with teachers and other classmates, thus leading to wider social communication, which reflects that they have higher ability in comprehensive quality and general education.

Grade variance analysis on learning experiences and rewards of college students shows that freshmen and juniors have higher scores in study activities than sophomores and seniors do. And there exists grade variance in university rewards, in which the juniors obtain the highest scores and the seniors, the lowest. The possible reasons are as follows: The freshmen, because of freshness and curiosity, may continually take part in various study activities and therefore obtain the higher scores. Sophomores may be more reasonable in cognizing the university and choosing study activities, thus obtain lower scores. Owing to the need for course study and study activities, the juniors may reach the peak in taking part in various activities and getting abundant development, and thus get the highest scores in study activities and learning rewards. For less course tasks and preparing for jobs, the seniors have not been enough time in universities to take study, and then they decrease the learning rewards in self-evaluation. In accordance with the conclusion of this investigation, the learning experiences and rewards of college students may suffer more influences from external tasks and environment.

Correlation analysis on learning experiences and rewards of college students, the independent variable have positive correlation with dependent variable, therein study activities, in-class learning and social communication have medium positive correlation with university rewards, which effectively testifies that the elements embodying individual subjective initiatives of college students have close relation with learning rewards, i.e., those students who often contact with teachers and students, take part in club activities, effectively utilize resources in universities, dedicate in study activities, practically join in course study and prefer to exchange learning contents can acquire more rewards.

Multiple regression analysis on learning experiences and rewards of college students shows that the contribution ratio of variance of family background, study activities, in-class learning, university resources, social communication, individual effort and campus environment upon university rewards is 28%, which illustrates that learning rewards of college students are affected by the combination of external elements as university environment and resources and internal elements as individual cognition. Therein study activities, in-class learning and campus environment have positive influence upon university rewards, which means that universities can strengthen the construction of campus environment, improve the effect of in-class teaching, enlarge the guide in the utilization of library resources, writing experiences,

application of computers and experiences on scientific experiments to increase learning rewards for college students.

CONCLUSION AND SUGGESTION

It can be described as follows from the viewpoint of SoT learned by college students to analyze SoT: Family background and supporting campus environment are taken as objective background element of SoL, individual efforts, social communication, university resources, study activities and in-class learning are served as subjective element of SoT, and learning rewards can be referred as achievement element of SoT. In view of the conclusion of the aforesaid investigation, among aspects affecting achivement elment of SoT, both objective background element and subjective element have decisive influence upon achievements of SoT of college students. If deciding teaching by learning and formulating relevant strategies about SoT of college teachers, the following suggestions can be taken as reference:

First, in accordance with academic activities and objectives of college students, we should improve SoT levels of college teachers to make training on teachers fit for learning interests and needs of students, that is to say, SoT should be combined with SoL of students. Teachers should be involved in various activities with students in or outside classrooms in that joint activities with students can truely improve SoT of teachers and comprehensive development of students, and thus promote the teaching quality of college teachers.

Second, we should lay stress on construction of campus environment of universities, not only strengthen the perfection of hardware resources, but also change the contact way of teachers and administrators of universities with students and create humane environment. Either scholarship learned by students or taught by teachers can not be without supporting and serving environment of universities, and the creation of this environment is a kind of faculty behavior or administrative issue rather than a kind of extensive cultural behavior which requires joint efforts of multiple subjects as teachers, students and universities.

Besides, we should strengthen in-class teaching reformation and research to improve SoT of teachers. In-class teaching is the main position for teaching college students, and also the key to promote teaching quality. The future studies should enhance training and guidance on teachers from the aspects as disciplinary knowledge, teaching knowledge, teaching skills, association of teachers and students, etc..

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