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EXPLORING IMPACT OF STUDENTS' SATISFACTION WITH THEIR COLLEGE MAJOR ON MOTIVATION AND ACADEMIC OUTCOMES IN CHINA

YuanShan Hu
College of Foreign Language (International School), Southwest Forestry University, Kunming 650224, Yunnan, China.

Abstract: The current study aims to explore how college students' satisfaction with their major field learning could positively influence their study motivation on courses related to their major, and also improve the students' academic outcome. Approximately 200 junior and senior Chinese college students participated in the survey for processing current study, and have voluntarily completed the questionnaires concerning study satisfaction and motivation. Although most of the previous researches indicated the correlation was positive between study satisfaction and study motivation, as well as between study satisfaction and academic outcome, the overall results of current study have only found the positive correlation not only between study satisfaction and study motivation, but also between study satisfaction and academic outcomes. However, the former one is stronger than the latter one. Specifically, the degree of junior students' satisfaction with their major field learning was higher than the senior students', but the academic outcomes were lower than the senior students. According to these results, it could be assumed that the students' satisfaction with their major field learning is highly useful to explain whether the educational quality provided by the major program guide the students' future career planning and well-being.
Keywords: Study satisfaction; Study motivation; Academic outcomes

1 INTRODUCTION

There have been dozens of researchers focused on how to improve college students' study motivation and a higher achievement level. Each student's personality, school and teaching quality and some specific social tasks are always considered as the main aspects related to this issue. The purpose of the current study was to explore Chinese college students' satisfaction with their major learning experience, which is expected to be related to their interest in their major field and instructional component. This influences their study motivation and academic outcomes.

According to the theory of student satisfaction, which has been identified as a predictor for higher academic achievement [1], higher education greatly aims to recognize the importance of students' needs and places emphasis on providing students' perceptions and needs [2]. It has been shown that students changed their preferences for different teaching-learning arrangements, expressed reasons for attending college, and enrolled in educational role with decision-making. Thus, there was a close relationship between the students' satisfaction and the quality of major program, concerning the students' attitude and orientation [3]. Satisfaction with their major of study has explained the fulfillment of expectations regarding the design of major program and required study courses and activities. Although the considerations about the quality of the education major could maintain multiple relevancies, current study discussed the study satisfaction concerning interest, instructional/educational quality for students' experience in their major field of study.

Previous studies about students' satisfaction have shown that the students' satisfaction had a positive impact on student motivation, student retention, recruiting efforts and fundraising [2,4]. Specific interest in their major and instructional/educational components [2,3,5,6], which measured the essential components of students satisfaction with major study, correlate to study motivation and academic achievement.

There are might be a gap between the Western theory and Chinese implication, based on the theory of culture difference. However, past Chinese studies also discussed the related issues and indicated that, the higher degree of college students' satisfaction with their major field study, the more positively the satisfaction correlates performance and self-regulation, which could predict a higher motivation and achievement level [7].

Overall, the primary research question for this study have been conducted about how the students' satisfaction with their major has a positive correlation with their study motivation and/ or learning outcomes; and for exploring this question, the directional hypotheses were the major study degree of satisfaction would be positively related to students' motivation, as well as their learning outcomes; meanwhile, each of the two main dimensions of students' satisfaction with their major field learning experience: study interest and instructional quality also correlated with study motivation and academic outcomes. Additionally, gender, major status, and grade differences would also be considered because these components could influence the relationship between students' satisfaction with their major field of study and their study motivation, as well as the study outcomes.

2 LITERATURE REVIEW

2.1 Student Satisfaction

Student satisfaction was derived from customer satisfaction theory, which defined as the main outcome from marketing relevance and related to post purchase with customers and phenomena such as attitude change, repeat purchase, and brand loyalty [8]. Student satisfaction is a complex concept for providing service by the universities, and it is a reasonable evaluation result from students' subjective attitude to their experience and outcomes according to their received education; however, it always influence or reshaped by campus environment educational factors [5].

Elliott and Shin indicated that student satisfaction not only help universities to reorganize the resources to adapt and meet students' need effectively, but also promote students' positive impact on study motivation, student retention, recruiting efforts and fundraising, thus, it viewed as an important concept to be assessed. Based on the Student Satisfaction Inventory, he built a satisfaction measurement maintains an aggregate (single-item) or attribute (multi-item) level, to exam the correlation between student prior expectations of product outcomes and perceived product performance. Overall, they demonstrated the results that the attributes like getting desired classes, availability of advisors, and access to information are three significant predictors of student satisfaction. In general, he concluded the academic components related to student personalities and instructional quality was more effectively associated with student satisfaction [5]. Meanwhile, Wiers-Jenssen et al. did an empirical deconstruction interpretation towards this theory, but focused on the academic and pedagogic quality of teaching, which was pointed as the crucial determination of student satisfaction. He found that the good learning conditions for students provided by study programs, such like close teacher-student relationship and problem-based learning, the students' satisfaction are highly qualified, as well as their learning outcomes. However, Borden found a weak relationship between student satisfaction and academic accomplishment. Thus, this type of relations needs to be explored more clearly. In addition, Cha found than in different culture background counties like China and Japan where the confusion traditions influence personality since old time, the students' satisfaction may not positively associates with their better performance and higher learning outcomes.

While the relationship between students' satisfaction and their study motivation has been discussed a lot in previous researches, most of the results has shown a positive situation [1,4,7,9]. Theoretically, many researchers have argued that student satisfaction is necessary for continued motivation Furthermore, Donohue and Wong demonstrated, "satisfaction had a greater influence on performance than performance had on satisfaction" that satisfaction with college can be a predictor of motivational achievement, and improve the continuing motivation in further learning. Specifically, Suhre et al. also indicated the satisfaction with degree program in college is a mainly stimulating component to students. Following the effective learning theory, he pointed out that the unsatisfied students they may not have the essential motivation to perform well in academic, which could lead to dropout in college. Recent research has also shown that the relationship between grades and student satisfaction could be resulted as a welcomed causal relationship among other variables, and the relationship between motivation and student satisfaction has not been a substantial causal model [1].

2.1.1 Satisfaction with college major field learning

Nafziger et al. has already identified that major field is an immediate environment for college students' daily contact involving persons and activities, thus, major field is defined as an immediate sub-environment related to students daily academic performance. And regarding to Morstain, he examined students' satisfaction with their academic major program, and indicated that students were showing greatly different to be enrolled in their study program, because of their personality characteristics, backgrounds, and interest. Therefore, their satisfaction with the study program may lead the different outcomes in learning. That means the students dissatisfied with their academic program would have a lower personal educational orientation level in college. However, those differences were always shaped by curricular-instructional environment and the faculty-student congruence [3]. Besides that, other researchers also stated that Quality of College Life has been predominated by academic aspects, social aspects, and facilities, that is, student satisfaction could be measured included in these dominate aspects [10,11].

Generally, the first year of enrolling major study remains students to consider whether the study meets their interest and expectation; if not, students may feel displeasure and lose the motives to prepare for exams well. As a result, the academic achievement level of these students may show a low lever, either [12]. Meanwhile, Schmidt, Debebec, and Comm minimized the research measurements to the marking major students' satisfaction in, and the results shown the higher degree of satisfaction leads to higher further persistence in college and even in future career. And Tranberg, Slane, & Ekeberg investigated that, students are mostly advised to fit their personal interest with particular occupations and even with a particular major ahead, and to follow up the major and the occupation to which they are suited results in satisfaction with the academic field of study, and then with the occupation career. According to this theory, Logue, Lounsbury, and Leong addressed their research to clarify that, students' satisfaction with major field is one of determinant of changing major and is related to overall level of well-being and life satisfaction on college, which also turn in playing as a precursor of withdrawal and dropout from college.

Although there have been a number of studies focused on the psychological factors related to satisfaction with college, few of them paid more attention to major satisfaction [13]. In current research indicates the study interest related to major filed and instructional/educational quality [2,3,5,6] related to major study satisfaction as the variables enrolled in college student major study survey.

2.1.2 Interest theory involved in student satisfaction

Study interest has been valued as the essential component refers to study satisfaction [1]. There is a variety of ways to definite the psychological concept of interest, but commonly it has been conceptualized as a phenomenon that produced by personal interaction within the specific environment, which also indicated the person-environment relations [14,15].

According to this statement, both Krapp et al. and Schiefele demonstrated two type of interest: individual interest and situation interest. Individual interest is relatively stable and always associated with enriched knowledge, positive emotions, and increased personal values; in contract, situation interest is considered to be generated primarily by certain conditions and concrete objects or activities in the environment. Moreover, there are two aspects of individual interest are classified: feeling-related and value-related. Although feeling-related and value-related valence beliefs have a high correlations, individual interest, which is assumed as antecedents of situation-specific valence, is the determination component to strength both intrinsic and extrinsic motivation [15]. However, Schiefele lso stated situational interest should be regarded as an actual seat during performance of an activity or a task with physiological, subjective, goal, and behavioral components, however, it always difficulty to be identified because of surrounding specific environment.

Recent researches have shown the concept of interest associate with intrinsically motivated behaviors that is characterized by concentration and engagement and referred the "flow" theory to describe this kind of enrollment which to higher intrinsic motivation [16]. He introduced the self-determination theory to illustrate the causal relations between interest and intrinsic motivation. He stated interest are look forward as the core affect of the self, which could be considered as the affect related one's self to activities that provide the challenge and motives. Thus, interest is theoretically linked to intrinsically motivated activities, and also associated to the extrinsically motivated activities that were integrated with one's intrinsic self. Moreover, in Schiefele's article, he addressed that although general motivational orientations and specific interests are not mutually exclusive, individual interests has been identified as one of the aspects to determine the strength and nature of the motivational orientation a student adopts in a specific situation involving learning a specific content.

Nearly all of the researches on interest have focused on the strong relations to learning aspect, and have identified interest as an evaluation of acquired achievement based on learning outcomes in acquired cognitive structure [14,17]. Most empirical studied of exploring association between interest and academic achievement use the correlation method to explain their relations, and some of the study using interest to predict the academic outcomes; most of the results showed the positive correlation [13,15,18]. Almost a hundred years ago, Deweyhas probed into the field of interest and learning in his book Interest and Effort in Education, and emphasized that there are two types of relations: interest-oriented learning and learning that disregards students' interest instead of giving pressure. Therefore, he indicated that, although the external attempts related to learning could lead to temporary effort, interest-based learning could be forward a positive habits and enrolling in knowledge training.

Decades Years later, the researchers who were also focused on this field found that based on school type, grade levels, and subjects, the average correlative estimated of the interest-achievement relation is approximately .30, the meta-analysis commonly used in researches [14,19,20]. Moreover, they also identified subjects matter-related interests have a high impact on gender difference; and there is a stronger relation between interest and academic achievement at a higher grade level. Specifically, Krapp et al., and Schiefele focused on individual interest study and pointed out the importance of the terms of qualitative criteria in text or reading based learning, because of the individual interest has to be strengthen here, which leads a higher achievement level. Meanwhile, situational interest regarding to classroom instruction and materials plays an essential role in determining learning achievement. Thus, both individual and situational interest is the domains in learning achievement.

In a sum, considering the influence of interest could shape college students' chosen on academic filed for college study [13], current study also would like to exam the interest factor enrolling in major study satisfaction to predict students' motivation and academic outcomes.

2.2 Theories of Study Motivation

The term motivation is derived from the Latin root, means "to move"; in this basic sense, the study of motivation is the study of action. In another word, motivational theories attempt to answer questions about how to get individuals moving and being will to enrolling the specific activities [21]. In their book, they also illustrated that many historical views of motivation were focused on behavioral theory of motivation that it is playing as a change in rate, frequency of occurrence, or form of behavior (response) as a function of environmental events, in contrast, cognitive theories indicate the causal relations between mental structures and the processing of information and beliefs, which emphasized that motivation is internal and learner's thoughts, beliefs, and emotions are more essential to motivate students engagement. Thus, drive theory could be the powerful evidence that addressed as internal factors to behavior that means individual is constantly seeking to rid himself of tension which threatens his well-being [22,21]. Although recent researches have move to focus on social- cognitive models of motivation, the drive and need theory still has assumed as operate at a more implicit or unconscious level [23].

Later, based on the effective researches of previous drive theory, motivation theory has been spited into two forms, extrinsic motivation and intrinsic motivation. Extrinsic motivation is a label described the old notion of behavior determined by drives and by stimulus, which assumed as response learning; Intrinsic motivation refers to things done for reasons of hit acting organism, which is the results of looking forward goals and adopt the situation [24,25]. That means, when individuals are intrinsically motivated, their engagement in an activity because of their interest and enjoyment in the activity; when extrinsically motivated, individuals engage in activity for some other reasons like rewarding or instrumental values [26].

Motivational theories are concerned with improving student behaviors with energization and direction; therefore, recent researches addressed social-cognitive models with cognitive, motivational, and regulatory constructs to emphasize the

individual differences [23]. For studying the components strengthen students' motivation, there have been several important models and beliefs have addressed to explore this issue. Firstly, self-determination theory has been integrated both need and social-cognitive model. In previous studies, it has been demonstrated that three basic needs enrolling in self-determination theory model: 1. competence, he desire for being competent in interactions with the environment; 2. autonomy, the need for autonomy refers to a desire for autonomous feeling or controlling in terms of own behaviors; 3. relatedness, the need for relatedness refers the willing to be attended to a group [26,27]. And Ryan and Deci has summed this model also included emotions and achievement motives within the needs for success and the fear of failure. Secondly, adaptive self-efficacy and competence perception could motive students in their learning, because when people expect to do well, they tend to try hard, persist, and perform better, that confident students will be more cognitively engaged in learning and thinking which could leads their success [23,28]. Thirdly, adaptive attributions and control beliefs could motivate students has a positive relations to cognitive, motivational, affective and academic achievement. There are four types of extrinsic motivational styles: external, introjections, identification, and integration, that has been identified the positive correlation between the more internalized styles and more engagement in school and better learning and performance [29]. Fourthly, interest theory has been considered as another essential belief to motivate students, that both individual and situational interest has shown the higher levels of them has stronger association with more cognitive engagement, more learning, and higher level of achievement [14,17,23,26]. Fifthly, the goal and goal orientation beliefs are also playing a dominant role in motivating and directing human behaviors [30-34]. Goal theory includes the goal content [34], which are multiple goals that students can pursue in learning and goal orientation and goal orientation, which is the nature of the goals serve to approaching and engaging in achievement tasks [32-34]. Moreover, mastery and performance goals are always indicated as the most important part of goal orientation theory, because there have dozens empirical evidence from both experimental and classroom correlation studies that they can be adaptive for increasing some actual outcomes [23,25,26].

However, there should be another consideration and beliefs to predict and strengthen motivation, and also change or influence student motivation in different situations. Generally, Gender differences in motivation and culture differences in motivation have also been discussed in previous research [23,35-37]. Therefore, most cross-cultural researches on motivation have shown that the culture reinforcement in individualistic and competitive striving for personal goals always attempt to diverse cultural meaning s and modes of achievement, that encourage adoptable activities enrolling in the process to increase and strengthen motivation [23,36,37].

3 METHODOLGY

3.1 Participants

A sample of 192 Chinese college students participated in the research. All of them are the junior or senior students and studying in different major programs enrolling in Yunnan Normal University, one of the oldest comprehensive universities in Southwest China. There are 120 female and 72 male involved; 97 of them are junior students and 95 of them are senior student. According to their major programs enrollment, they could also in categorized in arts, business and science majored, and there were 91, 53, 48 students in each participant group in the research.

3.2 Procedure

For doing this research, the researcher chose one of the universities in China, Yunnan Normal University to do the paper-based survey and examine the questions addressed before.

Firstly the researcher contacted the administration office of Yunnan Normal University, explained the goal and procedure for doing the survey, and asked for the permission to contact three professors, one is teaching Arts majored classes, one in teaching Business majored classes, and another one is teaching Science majored classes. All of them are also the instructors of junior or senior level classes and to do the survey in five of their classes. Then, the researcher entered the classes and hand out the questionnaire under the instructors' guidance. Data were collected in the beginning of 2010-fall semester. This consisted of approximately 200 students to participate. The students were given the questionnaire forms to take at least 30 minutes to finish them. Each of the questionnaire contained 7 general information including 3year GPA scores need to be self reported and 46 questions which pertained to demographics, the general study satisfaction with major study and study motivation enrolling in major study. The options chose by the participants considered as the correctly description of their personal feelings and understanding from each question and fitting their major study experience. All the information listed on the questionnaires has been treated as confidential information to do this professional project.

There were several steps have been done in order to protect the human subjects. First, permission for contacting the instructors who were teaching junior or senior level no major limited classes and for doing the survey in their classes has been received before handing out the questionnaire forms. The students were completely voluntary and could withdraw from the session at any time or decline to answer any questions that they did not feel uncomfortable answering. There were no identifiers questions like asking name, age, and birthday on the questionnaire so the participants remained anonymous throughout the study. In addition, there was another written informed consent letter attached with the questionnaire forms to explain the protective process in the survey and the rights for each participant, and the students for further information could keep it. Therefore, there was no risk for the students and none of the

questions asked involved sensitive issues. Overall, the Exempt Certification Application has been received from the IRB application office of Miami University.

3.3 Instruments

The instrument used in this study was a paper-based questionnaire. The questionnaire contained 4 parts: Part 1 consists of some self-reported general personal information, such as gender, major and grade; Part 2 is a 15 items scale concerning the satisfaction with major study in college; in addition, two overall major interest items represented the students' interest in their major field included in study satisfaction scale; Part 3 was an 31 times motivation scale from Motivated Strategies for Learning Questionnaire (MSLQ); Part 4 was also the self-report questions asking the student's learning outcomes, represented by GPA scores in each academic year.

Specifically, in part 2, major satisfaction scale measures the students' degree of study satisfaction with their enrolled major field study on a 15 items 5-point scale. The first item concerns student self-determination toward major enrolling; item 3, 4, and 15 measures the overall study satisfaction with major study. Moreover, item 2 and 9 represents student interest in enrolling major field, and other items were mainly associated with the instructional/educational quality of major program including: interacting with teachers (item 8, 11, &12), instructional designing (item 5, 6, 7, & 10), and academic and social goal setting (item 13 &14). Two experts who studied in this field have reviewed the content of this scale. A few changes were then made to make sure each question that was included and necessary and the data gathered would help answer the questions addressed in the study. Therefore, the content validity of the instrument has been confirmed for using. Moreover, in the 47 participants involved pre-survey to identify the internal reliability of major satisfaction scale, that Cronbach's coefficient alpha was .828 for the set of scores.

In part 3, the motivational scale which was on part of Motivated Strategies for Learning Questionnaire (MSLQ) is measuring students' motivation in major related course study on a 7-point scale. The Cronbach's coefficient alpha of overall internal reliability is .825. There are 31 items was measuring study motivation by assessing students' goal and value beliefs for the courses. The Motivational scale was designed regarding a general motivational constructs: A. expectancy, B. values, and C. affect; and three subscales were listed in the motivational scale to measure value beliefs: A. intrinsic goal orientation, B. extrinsic goal orientation, C. task value beliefs; and D. test anxiety scale was also include to respond the complementary motivation beliefs. Thus, the validity has been examined in bunch of previous studies that it has been confirmed good for using. Meanwhile, internal reliability coefficients of each component have also been demonstrated already: .74 for intrinsic goal orientation components, .62 for extrinsic goal orientation components, .90 for task value components, .68 for control of learning beliefs, .93 for self-efficacy for learning and performance components, .80 for test anxiety components.

4 RESULTS

The means, standard deviations and other descriptive statistics were presented in Table 1.

Table 1 Descriptive Statistics for the Study Variables

Variables	N	Mean	SD
Study Satisfaction (Total)	192	3.07	.68
Male	72	3.19	.66
Female	120	3.00	.68
Junior	97	3.29	.54
Senior	95	2.85	.73
Arts majored	91	3.02	.67
Business majored	53	3.03	.77
Science majored	48	3.21	.57
Study Motivation (Total)	192	4.66	.75
Male	72	4.81	.76
Female	120	4.57	.73
Junior	97	4.66	.75
Senior	95	4.66	.75
Arts majored	91	4.54	.68
Business majored	53	4.80	.84
Science majored	48	4.74	.74
Average GPA score (Total)	170	3.32	.47
Male	65	3.29	.45
Female	105	3.34	.47

Variables	N	Mean	SD
Junior	88	3.28	.45
Senior	82	3.37	.48
Arts majored	82	3.44	.43
Business majored	41	3.17	.53
Science majored	47	3.25	.43

Generally, the Mean of overall study satisfaction score is 3.07, the Standard Deviation is .68; the mean of total study motivation score was 4.66, the Standard Deviation is.75; and the mean of average academic outcomes GPA score was 3.32, the Standard Deviation was .47. However, there were some missing values within GPA score.
Moreover, the female students scored lower than male students on study satisfaction and the motivation but higher on average GPA; and the Science majored students scored highest on study satisfaction, Business majored students scored higher on study motivation, and Arts majored students scored higher than others on GPA scores. However, the junior students scored on both study satisfaction and study motivation higher than senior students, while they GPA scored lower than the senior students.

4.1 Correlations

The primary research question of current study asked if students' satisfaction with their major field would relate to their study motivation and academic outcomes GPA score. To answer this question, the Bivariate correlations were used to determine the relationship between the students' major study satisfaction and study motivation, and also the relationship between major study satisfaction and their academic outcomes. As can be seen in Table 2, the correlation between major study satisfaction and study motivation was greatly significant ($r = .364$, $p < .01$, $n = 192$), thus the null hypothesis was rejected and assert that there was a greatly positive significant relationship between the students' major field study satisfaction and study motivation. At the same time, the correlation between major study satisfaction and academic outcomes referred by average GPA scores also showed significant ($r = .187$, $p < .05$, $n = 192$). Therefore, the null hypothesis was also rejected, and it indicated the significant correlation between major study satisfaction and academic outcomes; however, this correlation was not as great as the correlation between study satisfaction and study motivation.

Table 2 Correlations among Overview Major Study Satisfaction, Study Motivation and Average GPA

	Study motivation	**Average GPA**
Study satisfaction	.364**	.187*
Study motivation	--	.199**

Note: N = 192. *p < 0.05, **p < 0.01

Furthermore, other Bivariate correlations were also conducted with the two categorized dimensions, study interest and instructional quality (including: interacting with teachers, instructional designing, and academic and social goal setting) involved in students' satisfaction. As Table 3 shown, both dimensions study interest and instructional quality within study satisfaction significantly correlated with study motivation and academic outcomes.
Particularly, the correlation between study interest and study motivation was more strongly significant ($r = .465$, $p < .01$, $n = 192$) than the correlation between study interest and average GPA scores ($r = .185$, $p < .05$, $n = 192$); at the same time, the correlation between instructional quality and study motivation ($r = .301$, $p < .01$, $n = 192$) was also more strongly significant than the correlation between instructional quality and average GPA ($r = .194$, $p < .05$, $n = 192$). However, within the instructional quality dimension, the components of interacting with teachers had stronger significant correlations with both study motivation ($r = .273$, $p < .01$, $n = 192$) and GPA scores ($r = .204$, $p < .01$, $n = 192$) than other components, instructional designing and academic and social goal setting.

Table 3 Correlations between Study Satisfaction Dimensions with Study Motivation and Average GPA

Satisfaction Dimensions	Study motivation	Average GPA
Study Interest	.465**	.185*
Instructional Quality (overall)	.301**	.194*
Interacting with teachers	.273**	.204**
Instructional designing	.261**	.152*
Academic and social goal setting	.236**	.154*

Note: N = 192. *p < 0.05, **p < 0.01

4.1.1 Gender, major status, and grade differences on study satisfaction

For comparing the differences between male and female, among different major enrolled student, arts major students, business major students, and science major students, specifically independent-samples t-tests and one-way ANOVA t-test have been conducted for depth examining.

The independent-samples t-test was used to evaluate the hypothesis that no difference exists between the male and female students for their major study satisfaction, study motivation and academic outcomes. Therefore, the results showed NO significant difference between male and female on their satisfaction means, $t(190) = 1.79$, $p > .05$; and also NO significant difference on GPA means, $t(168) = -.73$, $p > .05$; however, there was significant difference between male and female on their motivation means, $t(190) = 2.19$, $p < .05$, that male students were more motivated than female students in their learning experience. Thus, the only existing difference between male and female students was in their study motivation comparison, no difference within their study satisfaction and academic outcomes.

One-way ANOVA analysis was conducted to measure the relationship among different major status: Arts, Business, and Science majored students. The Satisfaction ANOVA procedure indicated NO significant difference among the different major group means: $F(2, 189) = 1.42$, $p > .05$); and the Motivation ANOVA procedure also indicated NO significant difference among the different group means: $F(2, 189) = 2.48$, $p > .05$); but Average GPA ANOVA procedure indicated the significant difference among the different major status group means: $F(2, 167) = 5.682$, $p < .05$), that Arts majored students' GPA scored great higher than the Science and Business majored students.

Other independent-samples t-test was conducted to exam the differences between the junior and senior students for their major study satisfaction, study motivation and learning outcomes. Table 4 showed, the significant difference between junior and senior student for their study satisfaction, $t(173) = 4.70$, $p < .05$. However, there was NO significant difference between junior and senior student for their study motivation, $t(190) = -.02$, $p > .05$, and also NO significant difference for academic outcome GPA scores, $t(168) = -1.15$, $p > .05$.

Table 4 The t-tests between Junior and Senior Students

Variables	Mean (SD)	t	df
Study Satisfaction (Total)	3.07 (.68)	4.70*	173
Study Motivation (Total)	4.66 (.75)	-.02	190
Average GPA (Total)	3.32 (.47)	-1.15	168

Note: N = 78. *p < 0.05

Therefore, the ONLY differences between those three categorized groups existed within the group of junior and senior students, but there was still no significant difference between junior and senior students for their study motivation scores and academic outcome GPA scores.

In order to explore how the differences between junior and senior students' satisfaction was related to their motivation, and also related to the academic outcome, the Pearson Product-Moment correlations were used to identify the relationships. Table 5 showed the results. The correlation between major field study satisfaction and study motivation for junior students ($n = 97$) was greatly significant ($r = .316$, $p < .05$), and the correlation between major study field satisfaction and learning outcomes GPA was also significant ($r = .379$, $p < .05$) but less strong than the former. Meanwhile, the correlation between major study satisfaction and study motivation for senior students ($n = 95$) was also strongly significant ($r = .445$, $p < .05$); in contrast, the correlation between major field study satisfaction and academic outcome GPA was not significant ($r = .142$, $p > .05$).

Table 5 Correlations among Study Satisfaction, Study Motivation and Academic Outcomes between Junior and Senior Student

	Study Motivation		**Average GPA**	
	Junior	**Senior**	**Junior**	**Senior**
Study Satisfaction	.316**	.445**	.379**	.142
Study Motivation			.127	.271*

Note. *p < 0.05; **p < 0.01

5 DISCUSSION AND CONCULSION

Based on the Bivariate correlation results of students' major study satisfaction and study motivation, and the results of major study satisfaction and their academic outcomes, it can be assumed that when the students are satisfied with their major field learning experience in college, the motivation for learning in the major field/program are much higher than the students who are not satisfied with their major field/program learning. However, although the major study satisfaction was also significantly correlated with the students' academic outcomes (GPA scores), it was not as strong as the correlation between study satisfaction and motivation. Additionally, both dimensions of interest and instructional quality involved in the study satisfaction variable were significantly correlated with study motivation, and it was also correlated with academic outcomes but still less strong than the former. That explained in internal and external aspects that could determine the students' attitude of satisfaction towards their major field learning experience which could greatly influence their study motivation, but have less impact on their academic outcomes.

According to these founding, the satisfied students could be more motivated to learning the major related courses and pay more attention to enroll in the major field learning. The positive result was consistent with past studies in finding the relationship between study satisfaction and motivation [1,4,38]. In contrast, the students are mainly satisfied with the major field learning, it may still be difficult to get an improbable higher academic learning after all. These results can not completely verify most previous studies that indicated the strongly positive relations between study satisfaction and both motivation and academic outcomes [1,2,5,7,9]. Moreover, there were few researchers who even found the negative relation between these study satisfaction and outcomes [39,40], such like Cha who has indicated the culture differences could influence and shape the students' learning performance, because of the traditional beliefs and religions. Hawkins specified the research in Asian cases and pointed out the education in East Asian counties shared common Confucian values to evaluate students learning performance, therefore, the students' outcomes were always influenced by family, teachers and groups than themselves. Other researchers have also concluded that the culture difference in learning environment may increase or decrease the effectiveness of learning strategies, that their learning outcomes does not only depend on their personal willingness of motivated learning, but also depends on their real activated behavior which is the real action of the students' learning performance [7,41,42]. Thus, although most of the western theory has assumed the strongly positive correlation between study satisfaction and learning outcome, it may not strictly apply to Chinese cases because of the different culture background.

Although the general instructional dimension of study satisfaction had stronger significant correlation with study motivation than it did with academic outcomes, the components of interacting with teachers had stronger significant correlations with both study motivation and GPA scores than other components, instructional designing and academic and social goal setting. This founding demonstrated the past studies that stress the power of interacting with instructor which considerably shaped the students learning behaviors, motivation and performance [43].

Regarding the comparing analysis between junior students and senior students, this study found that junior students' satisfaction with their major learning is significantly higher than the senior students. For the senior students group the study satisfaction was correlated with both of their study motivation and academic outcomes, and for the junior students groups their satisfaction with major study was only greatly significantly correlated with their study motivation but less greatly correlated with GPA scores. These results could be explained in two aspects [44-48]. Firstly, since most of the major related courses are provided to the students from their second academic in most Chinese colleges, the senior students have taken more major related courses and have almost gotten a completed overview of well-organized resources for the whole major program education. Thus, they can clearly identify what the criterion is for the major program setting, and if this criterion can positively relate to their personal planning forward to future career or lifestyle. Their judgment for major study satisfaction is more critical according to the clarified learning purpose in the mind. That means, the senior student can be motivated when the major study experience can meet or promote their personal future planning and setting that they understand it is benefit for their ongoing future plan for career and own life. They would be willing to pay more attention to study all; in contrast, they may not be motivated to study hard because they do not think it is useful for their future. However, their learning outcomes not only depended on their motivation of study, but were also determined by other aspects like the employment pressure from social society or other further expectation aspects. On another hand, the junior students have had less objective understanding of their enrolling major program. Their criteria for satisfaction with major field study is not completed and strict; they have a low expectation toward the major study since they have not focused on the usefulness and practicability in undecided future. Therefore, they may simply be motivated by their overview of satisfaction and completely get the great academic outcomes based on their concentrated major field learning [49,50].

In addition, although the students' satisfaction with major study correlates with their learning outcomes less strongly, it also can impact the students' motivation for learning better. To adapt and feed the students' need effectively, is a meaningful conduct for the college reorganizing the resource, re-identifying the target for serving student, and improving the major program designing and setting [51,52].

There were some limitations for doing this study. First, the sample selected for examining the questions addressed in this study was small for doing a critical academic research; and also, the sample was not randomly selected from ALL major departments in the university. Second, the survey of this research was limited within only one university in China, thus the results for examining the overall students might be less complete. Third, although this study was mostly based on western researches and theories, it still needs more founding and explanations from Asian and Chinese literatures and researches for exploring the depth reasons of this study's results. Overall, the further study should look for more strategies, and extend the sample size and university amount for gaining more completed results.

COMPETING INTERESTS

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REFERENCES

[1] Howard G S, Maxwell E. Correlation between student satisfaction and grades: A case of mistaken causation? Journal of Educational Psychology, 1980, 72(6): 810-820.
[2] Wiers-Jenssen J, Stensaker B, Grogaaard J B. Student satisfaction: towards an empirical deconstruction of the concept. Quality in Higher Education, 2002, 8(2): 183-195.
[3] Morstain B. An analysis of students' satisfaction with their academic program. The Journal of Higher Education, 1977, 48(1): 1-16.
[4] Suhre C J M, Jansen E P W A, Harskamp E G. Impact of degree program satisfaction on the persistence of college students. Higher Education, 2007, 54: 207-226.
[5] Elliott K M, Shin D. Student satisfaction: an alternative approach to assessing this important concept. Journal of Higher Education Policy and Management, 2002, 24(2): 197-209.
[6] Nafziger D H, Holland J L, Gottfredson G D. Student-college congruency as a predictor of satisfaction. Journal of Counseling Psychology, 1975, 22(2): 132-139.
[7] Guan G, Shiye M, Liu J, et al. Relationship between satisfaction with major, academic performance, and congruence. 2006.
[8] Churchill G A. An investigation into the determinants of customer satisfaction. Journal of Marketing Research, 1982, 19(4): 491-504.
[9] Aitken N. College student performance, satisfaction and retention: Specification and estimation of a structural model. The Journal of Higher Education, 1982, 53(1): 32-50.
[10] Sirgy M J, Grzeskowiak S, Rahtz D. Quality of College Life (QCL) of Students: Developing and Validating a Measure of Well-Being. Social Indicators Research, 2007, 80(2): 343-360.
[11] Yu G, Lee D G. A Model of Quality of College Life (QCL) of Students in Korea. Social Indicators Research, 2008, 87(2): 269-285.
[12] Albaili M. Differences among low-average and high-achieving college students on learning and study strategies. Educational Psychology, 1997, 17(1): 171-193.
[13] Logue T L, Lounsbury J W, Leong F T L. Vocational interest themes and personality traits in relation to college major satisfaction of business students. Journal of Career Development, 2007, 33(3): 269-295.
[14] Krapp A, Hidi S, Renninger K A. Interest, learning, and Development. In Renninger K A, Hidi S, Krapp A (Eds.), The Role of Interest in Learning and Development, Hillsdale, NJ: Erlbaum, 1992: 3-25.
[15] Schiefele U. Interest, learning, and motivation. Educational Psychologist, 1991, 26(3): 299-323.
[16] Deci E L. The relation of interest to the motivation of behavior: a self-determination theory perspective. In Renninger K A, Hidi S, Krapp A (Eds.), The Role of Interest in Learning and Development, Hillsdale, NJ: Erlbaum, 1992: 43-70.
[17] Schiefele U. Interest and learning from text. Scientific Studies of Reading, 1999, 3(3): 257-279.
[18] Ralston C A, Borgen F H, Rottinghaus P J, et al. Specificity in interest measurement: Basic Interest Scales and major field of study. Journal of Vocational Behavior, 2004, 65(2): 203-216.
[19] Schiefele U, Krapp A, Winteler A. Interest as a predictor of academic achievement: A meta-analysis of research. In Renninger K A, Hidi S, Krapp A (Eds.), The Role of Interest in Learning and Development, Hillsdale, NJ: Erlbaum, 1992: 183-211.
[20] Wigfield A, Cambria J. Students' achievement values, goal orientations, and interest: definitions, development, and relations to achievement outcomes. Developmental Review, 2010, 30(1): 1-35.
[21] Pintrich P R, Schunk D. Motivation in Education: Theory, Research, and Applications (2nd ed.). Upper Saddle River, NJ: Prentice-Hall, Inc., 2002.
[22] Bolles R C. Theory of Motivation. New York: Harper & Row, 1967.
[23] Pintrich P. A motivational science perspective on the role of student motivation in learning and teaching contexts. Journal of Educational Psychology, 2003, 95: 667-686.
[24] Csikszentmihalyi M, Nakamura J. The Dynamics of intrinsic motivation: a study of adolescents. In Ames C, Ames R (Eds.), Motivation in Education, Vol. 3, San Diego, CA: Academic Press, 1989: 45-71.
[25] Sansone C, Harackiewicz J M. Intrinsic and Extrinsic Motivations: The Research for Optimal Motivation and Performance. San Diego, CA: Academic Press, 2000.
[26] Eccles J S, Wigfield A. Motivational beliefs, values, and goals. Annual Review of Psychology, 2002, 53(1): 109-238.
[27] Baumeister R, Leary M. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 1995, 117(3): 497-529.
[28] Bandura A. Self-efficacy: The Exercise of Control. New York: Freeman, 1997.
[29] Ryan R M, Deci E L. Self-determination theory and facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 2000, 55: 68-78.
[30] Austin J T, Vancouver B. Goal Constructs in Psychology. Psychological Bulletin, 1996, 120(3): 338-375.

[31] Blumenfeld P C. Classroom learning and motivation: Clarifying and expanding goal theory. Journal of Educational Psychology, 1992, 84: 272-281.
[32] Elliott E S, Dweck S. Goals. Journal of Personality and Social Psychology, 1988, 54(1): 5-12.
[33] Heyman G, Dweck S. Achievement goals and intrinsic motivation: Their relation and their role in adaptive motivation. Motivation and Emotion, 1992, 16: 231-247.
[34] Wentzel K R. What Is It That I'm Trying to Achieve? Classroom Goals from a Content Perspective. Contemporary Educational Psychology, 2000, 25(1): 105-115.
[35] Meece J L, Glienke B B, Burg S. Gender and motivation. Journal of School Psychology, 2006, 44(5): 351-373.
[36] Maehr M. Culture and achievement motivation. International Journal of Psychology, 2008, 43(5): 917-918.
[37] Salili F. A model of culture and achievement behavior. In Kaplan A, Karabenick S, De Groot E (Eds.), Culture, Self, and Motivation: Essays in Honor of Martin L. Maehr, Charlotte, NC: Information Age Publishing, 2009: 183 -212.
[38] Donohue T, Wong E. Achievement motivation and college satisfaction in traditional and nontraditional students. Education, 1997, 118(2): 237-243.
[39] Borden V M H. Segmenting student markets with a student satisfaction and priorities survey. Research in Higher Education, 1995, 36(1): 73-88.
[40] Cha K. Subjective Well-Being Among College Students. Social Indicators Research, 2003, 62(1): 455-477.
[41] Vansteenkiste M, Zhou M, Lens W, et al. Experiences of Autonomy and Control Among Chinese Learners. Journal of Educational Psychology, 2005, 97(3): 468-483.
[42] Wu Y, Sun I, Cretacci M. A study of cadets' motivation to become police officers in China. International Journal of Police Science & Management, 2009, 11(3): 377-392.
[43] Martin A J. The relationship between teachers' perceptions of student motivation and engagement and teachers' enjoyment of and confidence in teaching. Asia-Pacific Journal of Teacher Education, 2006, 34(1): 73-93.
[44] Dewey J. Interest and Effort in Education. Boston: Houghton Mifflin, 1913.
[45] Hawkins J N. Issues of Motivation in Asian education. In O'Neil H F, Drillings M (Eds.), Motivation Theory and Research, Hillsdale, NJ: Erlbaum, 1994: 101-115.
[46] Linnenbrink E, Pintrich P. Motivation as an enabler for academic success. The School Psychology Review, 2002, 31: 313-327.
[47] Martin A J, Dowson M. Interpersonal Relationships, Motivation, Engagement, and Achievement: Yields for Theory, Current Issues, and Educational Practice. Review of Educational Research, 2009, 79(1): 327-365.
[48] Pintrich P R, Smith D A, Garcia T, et al. Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). Educational and Psychological Measurement, 1993, 53(3): 801-813.
[49] Schmidt S L, Debebec K, Comm C L. Marketing majors' satisfaction with their college experience: Implications for strategic planning in marketing departments. Journal of Management Education, 1984, 9(3): 58-63.
[50] Skinner E A. A guide to constructs of control. Journal of Personality and Social Psychology, 1996, 71: 549-570.
[51] Tranberg M, Slane S, Ekeberg S E. The Relation between Interest Congruence and Satisfaction: A Metaanalysis. Journal of Vocational Behavior, 1993, 42(3): 253-264.
[52] Wentzel K R, Wigfield A. Academic and Social Motivational Influences on Students' Academic Performance. Educational Psychology Review, 1998, 10(2): 155-175.