

## Quantitative Analysis Modelling of College Dormitory Culture

Ling Wu

Huai'an College of Information Technology  
Huai'an, Jiangsu, China

**Abstract** — College dormitory culture plays an important role in the wellbeing of students, shaping their personality and playing an important part in their daily life activities to develop values, behavior and relationships. Strengthening the formation of college dormitory culture improves the overall quality of the student experience which is a main objective requirement of modern education. This paper uses quantitative methods to analyze and generalize college dormitory culture development in 6 major areas: infrastructure, system culture, behavior cultural, spiritual cultural, dormitory park and overall function. The survey results show that most students have a clear perception and understanding of the issues of dormitory culture and believe it has positive features that enrich the flavor and content for campus life.

**Keywords** - college dormitory culture; quantitative analysis; cultural construction

### I. INTRODUCTION

#### A. College Dormitory Culture Connotation

College dormitory culture is an important part of the campus culture; it is jointly created by college students thought the practice in learning and life, its core is the value of college students, performance out of a spiritual atmosphere by activities and physical form that can carry the value system. College dormitory culture is a sum of the dormitory system, dormitory spiritual, cultural Activities and cultural environment; it is a specific workplace culture in the campus culture.

College dormitory is the main space of students study, live and exchange ideas; it is also an important place for students' healthy development. Students live together in the long term, and gradually formed their own subculture - college dormitory culture. College dormitory culture plays an important and inconsiderable role in the growth of students, Shaping of personality and the formation of life, values, behavior, relationships. Strengthening college dormitory culture construction, improve the overall quality of students is the objective requirements of modern education development.

#### B. Relationship Between College Dormitory Culture and Campus Culture

First, college dormitory culture is an important part of campus culture; it is foundation to create a good campus culture. Campus culture are spiritual environment and culture atmosphere which take students as main body, campus as activity space, extra-curricular activities as main content, Involved and created by the majority of teachers and students. Campus culture must follow the requirements of the campus culture construction. [1] As an important part of campus culture, college dormitory culture is extension and supplement of college class and a very important aspect of Colleges Campus Cultural Construction.

College dormitory is not only an accommodation places, but also a main positions for students learning, and activities; it plays a very important role in the school education management. It through a certain physical environment and spiritual atmosphere, make the individual Identify in ideology, psychology, behavior, values and other aspects, so that shape the students spirit, soul and character. Therefore, student's ideology, psychological, aesthetic taste, habits, life skills, etc., will gradually form in this space [2].

College dormitory culture is a specific workplace culture, it is jointly created by College Students thought the practice in learning and life, its core is the value of college students, Performance out of a spiritual atmosphere by activities and physical form that can carry the value system. College dormitory culture is a sum of the dormitory system, dormitory spiritual, cultural Activities and cultural environment. Therefore, a good college dormitory culture and the environment has become a basic condition of training and bringing talents and foundation to create a good campus culture [6].

Secondly, college dormitory culture is the refractive of campus culture; it has a role in promoting development of campus culture. As a cultural phenomenon, college dormitory culture is neither a vacuum, nor a spontaneous formation, it is a results consciously constructed by the dormitory members under the influence of campus culture. The development of college dormitory culture produced in the integration process of campus culture absorption, internalization and processing. Some subcultures on campus, such as teaching culture, management culture, service culture created by school teachers, administrators and campus staff, and the learning culture, sports culture, arts culture and entertainment culture created by students can produce a wide range radiation in different level in the student dormitory.

Modern information tools have advanced the schooling to a three-dimensional space, which deeply enhance the possibility developing of college dormitory culture. On campus, various cultural form a complex, multi-level and

multi-type campus culture environment. Faced with this environment, college dormitory culture form a special refractive effect, that college dormitory culture is neither simply a replica of the campus culture, nor passively accept the influence of campus culture environment, but proactively create a college dormitory cultural environment which meet college students demand conducive to healthy growth of college students. [7] At the same time, college dormitory culture needs to form a special cultural environment different to the overall campus culture to promote the development of the campus culture.

College dormitory is a comprehensive place which set the students life and rest, knowledge learning, capacity building, ideas exchanging, cultural infiltration, communication, physical exercising, mental training and other functions, directly reflects students' mental outlook. Dormitory cultural construction directly affects the college's spirit, study construction and the ideological and cultural quality improvement. Strengthening the construction of dormitory culture has an extremely important role to promote the campus culture construction and cultivate talents ability and political integrity [3].

#### C. Connotation and Nature of Quantitative Analysis Methods

Quantitative analysis method known as quantitative analysis techniques, it mainly refers to use mathematical methods to reveal and describe the number dependencies between the various elements in managed object system and series mathematical models and simulation models of management target control feature. Management science and operations research focuses on these methods, such as linear programming, goal programming, dynamic programming, network planning techniques, queuing theory, storage theory, game theory, Markov process and input-output analysis. These methods have widely used in the field of production and management, military operations, construction management, scientific experiments, economic planning, etc [8].

Characteristics of quantitative analysis method is the clear practical; it performance by mathematical model and solve problems to get the most reasonable solution of problem. It services in management decision-making, requires managers to consider problems from the point of total optimization. Therefore, quantitative analysis method sometimes referred as management optimization methods. Quantitative analysis method is considered as a modern scientific management methods as an important complement to the qualitative analysis [9].

Quantitative analysis determined the exact formula between the relevant factors by determination the value of the target object, it is a recognition having a definite logical structure, these logical structures continues to expand and achieve quantitative analysis. These analyzes involve theoretical knowledge, professional knowledge, mathematical knowledge, software knowledge, it need for specific guidance. In the quantitative analysis process, researchers get a lot of raw information systematically and selectively, raw these information into mathematical research

system, and assimilation, integration, abstraction, generalization according to a certain number relationships and norms, led factors to a unified manifestation, service to reveal the truth.

Quantitative analysis method has the characteristics of a conventional method; it belongs to the general method of methodology hierarchy. In terms of the nature or the content, quantitative analysis method has its own special aspects under the premise of the methodology. Quantitative analysis and qualitative analysis method is relatively, compared to qualitative analysis method, Quantitative analysis method has its unique meaning [10].

Quantitative analysis method is an effective research method with the development of economic science; it gives research of the college dormitory culture construction a new impetus, and plays an important role in the research of the college dormitory culture construction. Research of the college dormitory culture construction based on quantitative analysis is a method to get a regular Understanding of college dormitory culture by the mathematical instruments such as calculus, linear algebra, probability theory and mathematical statistics.

#### D. Role of Quantitative Methods in College Dormitory Culture Construction Research

Quantitative analysis method belongs to the general method of methodology hierarchy, it study of college dormitory culture by the methods of observation, experiment, research and statistical, in order to obtain objective facts, it proposed a strict requirements for the rigor, objectivity and value-neutral of research. Quantitative analysis methods usually take the form of data on the phenomenon described [4].

Qualitative analysis method obtains first-hand information thought participant observation and in-depth interviews, the concrete methods include participant observation, action research and historical research. Participant observation is a method of qualitative analysis methods frequently used. The advantages of participant observation is that the reason, attitude, strive program and action decisions can be observed. By participating, the researchers can get feel and understood the action more fully. Through the information obtained, using induction, gradually transformed from concrete to abstract and formation theory.

This paper uses quantitative analysis method, analysis and generalizes the college dormitory culture construction achievements form 6 major areas: Infrastructure construction, System culture construction, behavior cultural construction, Spiritual cultural construction, Dormitory park service job satisfaction survey and Overall satisfaction of college dormitory culture construction [5].

#### E. Basic Situation of College Dormitory Culture Construction Situation Investigation

In order to get an in-depth research of college dormitory culture construction, I participated in the college dormitory culture construction status special research activities. This research uses a combination manner of interviews and questionnaires. The main target of this research is

undergraduate’s students, located in science and engineering, humanities and social sciences and arts sports professional. On the sex ratio, girls accounted for 47% and boys accounted for 53%.

The questionnaire is designed to 7 parts: 1. User information survey, including basic personal information, dormitory basic information; 2. Infrastructure construction surveys, including dormitory internal facilities, dormitory area infrastructure; 3. System culture construction surveys, including dormitory system development, situation of students compliance and dormitory management personnel execution. 4. Behavior cultural construction survey, including dormitory Internet, chatting and dormitory cultural activities. 5. Spiritual cultural construction surveys, including relationships, dormitory cultural function and the impact of dormitory culture. 6. Dormitory park service job satisfaction survey. 7. Overall satisfaction survey of college dormitory culture construction.

For this survey, this paper analysis and generalization the college dormitory culture construction achievements form 6 major areas: Infrastructure construction, System culture construction, behavior cultural construction, Spiritual cultural construction, Dormitory park service job satisfaction survey and Overall satisfaction of college dormitory culture construction.

## II. DORMITORY INFRASTRUCTURE CONSTRUCTION

Dormitory supply and demand broadly balanced, infrastructure has improved, accommodations gradually optimized, laid a material foundation for the students’ growth and success. Most students live in the dormitories provided by school; the number of dormitories can basically meet the students’ accommodation demand. Survey shows that 97.1% students live in the school dormitory, less than 3 % students do not live in dormitories because of their own reasons. Dormitory quality, standards and accommodation greatly improved than before.

According to the survey, 74 % students live in the dormitory with separate toilet, 58 % students live in the dormitory with 3-4 roommates, and 3% students live in the dormitory with 1-2 roommates. As a result of university logistics socialization reform measures, a lot of social capital is absorbed into the college dormitory building; the infrastructure level of Dormitory Park has been greatly improved. In this survey, based on space order, we inspect the infrastructure construction situation according to three part as the dormitory indoor, dormitory area and dormitory outside area.

In the dormitory indoor, many facilities that have closely related with students living and learning have been configured. In the list, lists 8 common dormitory indoor facilities (TV, water heaters, network port, telephone, drinking fountains, electric fans, bathroom, air conditioning), Have more than 4 (including 4) accounted for 47%, the highest rate are network port (94 %), electric fans (82 %) and toilets (69 %). These in-room amenities available can make students to keep abreast of national and international political, economic, cultural and other information, abreast the latest

academic developments, strengthen link with the community, and greatly facilitates the college students’ learning and life.

In the Dormitory area, public entertainment, cultural and sports venues and service facilities were adequate to meet the basic service needs of university students, these facilities rich spiritual and cultural life, robust physique of college students. In the list, lists 8 common dormitory indoor facilities (Basketball courts, badminton courts, table tennis, tennis courts, study room, library, public baths, hot water house), have more than 4 (including 4) accounted for 92%, have more than 6 (including 6) accounted for 76 %. The highest rates are basketball courts (96 %), hot water house (87 %) and public baths (82 %).

In the dormitory outside area, there are more shops and cultural casino. In the list, lists 8 common dormitories outside area facilities (cafes, supermarkets, bookstores, restaurants, cinemas, bars, billiard halls and guest houses). The highest rates are supermarkets (86 %), restaurants (73 %) and cafes (55 %). Visible, the vast majority of students choose neighboring dormitory facilities are sensible, not indulge in pure. 56.7% students believe that the surrounding facilities make their life and learning more convenient and colorful, only 15.8% students think that the surrounding environment affects their learning and rest. Data shows in table 1:

TABLE I THE INFLUENCE CIRCUMSTANCES OF DORMITORY SURROUNDING FACILITIES (%)

Survey Project	The proportion
Make life more convenient and colourful	56
Impact study and rest, should be limited	15
It does not matter, no impact on me	23
Others	6

Overall, college dormitory overall environment is benefit to students’ learning and life; it also has a significant impact for the college dormitory culture construction.

## III. DORMITORY SYSTEM CULTURE CONSTRUCTION

Dormitory system culture construction mainly refers to the developed, implementation and compliance of the dormitory management system. Dormitory system culture construction is an important part of college dormitory culture construction; it is a system guarantee college dormitory culture construction. In this research, we start from three aspects: system development, system compliance and students’ evaluation of cultural construction system. Survey data is shown in table 2.

Form the survey data of the dormitory management system developed and compliance, it shows that all the campuses develop the dormitory management systems and most of them relatively. Table 2 shows that, more than 60% students clearly choose 'yes' to 8 dormitory management systems listed on the survey, and the highest reached 89%. This indicates that most students know and understand these

management systems in daily study and life. As can be seen from the table, the degree of dormitory management system compliance for students is high, more than 70% students can consciously abide system, but only Less than 5% students do not consciously abide system.

Thus, in the contemporary college students, the quality of most students is relatively high, they are able to consciously abide by school rules and obey the school management. In the satisfaction survey of dormitory system cultural Construction, more than 92% students are satisfied with the cultural construction system. These data shows that college dormitory management system is gradually improve and perfect, college dormitory system construction has achieved remarkable results.

It is worth noting that students put forward their own views about the dormitory management. Survey shows majority of students want the dormitory management can student-cantered, combine education and management, management within services, attach importance to self-education, self-management and self-service of college students.

TABLE II THE DORMITORY SYSTEMS CONDITIONS (%)

Project	System development			System compliance		
	Yes	Unclear	No	Yes	Sometimes	No
Health inspection system	89	4	7	85	11	4
Rest system	76	12	12	73	25	2
Hydropower use system	82	5	13	94	3	3
Computer management system	65	9	26	78	21	1
dormitory rating system	71	7	22	86	11	3
Facilities Protection System	69	8	23	92	8	0
Post announcement system	62	11	27	89	9	2
Activity Approval System	61	15	24	78	22	0

Overall, the dormitory management system relatively, better compliance, and students' overall satisfaction of cultural construction system is high.

IV. DORMITORY BEHAVIOUR AND CULTURAL ACTIVITIES CONSTRUCTION

Dormitory cultural activities is an important carrier of dormitory spiritual and cultural construction, it is an important way to expand students' quality. Students' dormitory cultural activities are forms and rich in content. From the formal point of view, dormitory and cultural activities have many types; they can be divided into ideological and moral category, sports entertainment category, science and technology competition category, social practices category, etc., in various forms, such as lectures, competitions, lectures, volunteer services. From the content point of view, the scopes of dormitory cultural activities are very widely, including subject knowledge of

politics, economy, literature, electronics, network, English and so on.

Most dormitory cultural activities carry out by the Communist Youth League and student organizations, these activities can improve the capacity and quality of the participants. When investigating the most common dormitory cultural activities organizers, 72% students chose the Communist Youth League and student organizations. When investigating the effectuation of dormitory cultural activities, 84 % students believe that it can improve their ability to participate dormitory cultural activities. The specific impact of dormitory cultural activities shows in table 3.

TABLE III THE SPECIFIC IMPACT OF DORMITORY CULTURAL ACTIVITIES (%)

Project	Great facilitate and enhance	Promote but general effect	No promote	Unclear
Organizational and planning	54	22	9	15
Communication and coordination	48	31	10	11
Interpersonal Adaptation	47	26	19	8
Team spirit	59	27	5	9
Political consciousness	43	32	14	11

In summary, the dormitory cultural activities are forms and rich in content, it plays an important role to improve the ability of university students.

V. DORMITORY SPIRITUAL CULTURAL CONSTRUCTION

College dormitory spiritual culture mainly through the dormitory spirit, dormitory behavior and dormitory interpersonal reflected. From the point view of investigation, 82.9% students believe that college dormitory overall atmosphere is positive.

Survey results show that learning, politics, social life are the most discussed topics of students, respectively accounted for 44%, 52% and 68%. Students in the dormitory often talk about national affairs, focus on learning and current affairs, they have a strong sense of social responsibility. Students' behavior and habit in the dormitory is civilized and healthy, In line with the psychological characteristics and the development law of young people, reflecting the youthful spirit and time characteristics.

Survey results show that internet, reading books and learning is the most often done things for students in dormitory, the proportion was 67%, 42% and 59%. They often use the internet learning, listening music, watching movies, finding information and browsing news in the dormitory to entertainment, reducing stress and increasing knowledge. The network has become an integral part for college students in dormitory life; it is an important tool for students to obtain outside information. Table 4 shows each grade statistics how to use the dormitory.

TABLE IV THE DATA OF STUDENTS IN EACH GRADE DONE IN THE DORMITORY (%)

Grade	Internet access	Read books	Learn	Leisure and entertainment	Communication
First grade	27	22	21	14	16
Second grade	22	21	26	18	13
Third grade	18	23	31	15	13
Fourth grade	16	24	37	12	11

Students have a strong sense of belonging and security to dormitory, roommates can help and care each other, relationships are very harmonious, contradictory process between them is relatively reasonable. Survey shows that when conflicts occur between members of dormitory, 64% students chose "Said afterwards, with a mild attitude" to solve problems, only 17% students chose "argue and quarrel" to solve problems. When asking whether dormitory membership harmony, 78% students believe that relationship between roommates is harmonious, only 6% students thought relationship between roommates is bad, In addition, the data also showed that 63% students view roommate as best friends.

Meanwhile, college students have a strong collective honor sense of dormitory, they pay attention to the protection of dormitory public goods, and can active participate in various activities, contributing their force to the healthy development of the dormitory. According to statistics, more than 70% students are willing to actively dormitory participate, 82% students are able to pay attention to protect the dormitory public good.

In short, the whole spirit of college students is motivated, behavior of dormitory members is civilized and health, classmates' relationship is harmonious.

#### VI. DORMITORY PARK SERVICE WORK

Attitude and level of dormitory park service directly related to the study and life quality of students in the dormitory campus, and it also has a profound impact on students' dormitory culture building. Dormitory park service work is covering all aspects of student life and learning.

On the business services, the dormitory parks contain bookstores, cafes, printing shops, repair shops, eateries, particularly in restaurants majority. On the public service, there are public canteens, public baths, public hot water room, public laundry room, study room, library, etc. These services greatly facilitate learning and life of college students. Survey data show that 79% dormitory parks have public baths, 84% dormitory parks have public laundry room, 65% dormitory parks have library, and 62% dormitory parks have study room.

For the basic services provided by the dormitory area, college students are basically satisfied. 76% students are satisfied with the dormitory area of water supply situation. 85% students are satisfied with the dormitory maintenance work and 52% students' dormitory offers free repair or

charge lower maintenance costs. the data of dormitory parks service satisfaction survey show in table 5.

TABLE V THE DATA OF DORMITORY PARKS SERVICE SATISFACTION SURVEY (%)

Project	Extremely satisfy	satisfy	General	Not satisfy	Unclear
Water and electricity supply	45	31	12	7	5
Recreational Facilities	22	34	27	11	6
Domestic services	28	32	21	12	7
Restaurant Management	19	38	26	12	5
Articles maintenance articles	32	53	8	3	4
Newspapers Supply	21	47	13	6	13
Opinions process	25	34	22	11	8

From the relationship between students and dormitory administrator, the majority of students have good relationship with dormitory administrator. When students need help, dormitory administrator will give them enthusiastic and actively help. From the surveys, 92% respondents have a good relationship with the dormitory administrator, 81% students believe that the administrator can follow rules and eager to help.

Therefore, dormitories park service works well, college students and administrator have harmonious relationship, and they are generally satisfied with the park service.

#### VII. STUDENTS' AWARENESS OF THE DORMITORY CULTURE

According to the survey, most students felt the dormitory culture and have a certain degree understanding of dormitory culture. They think that dormitory culture is an important part of campus culture, ethos and class atmosphere has a greater impact on dormitory culture. Survey results show that 38% students have strong feelings of the dormitory culture; only 4% students have no feeling of the dormitory culture.

TABLE VI THE RECOGNIZED OF HOSTEL CULTURAL FUNCTION (%)

Project	Extremely obviously	Obviously	Not obviously	No effect	Unclear
Education and guiding role	32	38	12	11	7
Constraint and specification role	29	42	16	9	4
Adjust and consolation role	22	43	15	6	14
Encourage and cohesion role	27	35	16	11	11
Assimilation role	33	29	18	13	7
Cultivate and modeling role	24	41	22	7	6

In addition, 65% students considered that dormitory culture is an important part of campus culture, 65% students think that school spirit and class wind have great impact on

the dormitory culture. For the function and role of dormitory culture, most students said that dormitory culture has positive features and adds a new flavor and content for campus culture. The recognized of hostel cultural function as shown in Table 6.

Overall, most students have a certain degree understanding of dormitory culture, and recognition function and role of dormitory culture.

#### VIII. CONCLUSION

This paper uses quantitative analysis research and analysis the university dormitory culture construction, investigated problems of Infrastructure construction, System culture construction, Behavior cultural construction, Spiritual cultural construction, Dormitory park service job satisfaction survey and Overall satisfaction of college dormitory culture construction by questionnaire. Survey results show that college dormitory culture construction has achieved good results; Students have high satisfaction, and actively participate in the dormitory culture construction. College dormitory culture construction has played a positive role to improve the overall quality of college students.

#### ACKNOWLEDGEMENTS

Huai'an College of Information Technology, the research will focus on the issue of Ideological and political (No. HXSZ1402); Jiangsu Province College of philosophy and Social Sciences Research Fund to guide the project (No.2014SJD248)

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