

Human Needs Scale in Campus Environment and College Students' Mental Health - A Case Study of Campus Landscape of Northwest A&F University

Jiaxiong Gao^{1*}, Jianjun Liao¹, Jiashu Wang¹, Haiming Zhao¹

¹ University of South China, Hengyang, China

Email Address

bugking4444@163.com (Jiaxiong Gao)

*Correspondence: bugking4444@163.com

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Abstract:

The construction of campus environment, especially the landscape within the campus, has always been a hot topic. University campuses are no longer merely places for teachers and students to carry out research activities and rest. With the development of open campuses and the derivation and expansion of multiple campus functions, their diversified development plays a special role and impact on students' growth, especially on the shaping and cultivation of students' mental health and three outlooks (outlook on the world, life and values) at the psychological level.

Keywords:

Campus Landscape Design, Environmental Psychology, Interactive Landscape, Gestalt

1. Introduction

With the popularization of higher education in China and the improvement of national quality, the number of people receiving high-quality education is increasing year by year. Schools are no longer just fixed places for teaching. University campuses are endowed with more functions. In addition to China's urbanization and the popularization of national education policies, university campuses have multiple identities such as research bases, academic research places, urban public spaces, and living spaces, which have special significance for the whole society and the country. As an important place for students' study and life, the university campus has a close relationship with students. Moreover, the main task of Chinese colleges and universities nowadays is to cultivate all-round high-quality students with "moral, intellectual, physical, aesthetic and labor" development. The campus landscape environment of colleges and universities, as an external environmental factor, is particularly important for students' academic performance, mental and physical health [1], and even affects the teaching level and scientific research ability of a university. The good style created by a good campus landscape environment undoubtedly plays

an absolute role in promoting the academic atmosphere of the whole school and the mental and physical health of all students.

Unlike “hard” infrastructure buildings, the campus environment of a university provides a “soft” atmosphere for teaching and research. In some specific sense and impact levels, this subtle influence of being affected by the environment is reflected in “learning in class and applying in life and practice environment”. However, the role of the environment is not only limited to the experiment, practice and understanding at the academic level, but also serves as students’ “second classroom” and “release space” to express and release their emotions, meet their human needs, and guide them with atmosphere. It uses a special “education” to “teach” students to live healthily, handle their emotions, and make themselves healthier and more comfortable. It is particularly important for the shaping of students’ mental health and personality.

Nowadays, humanistic care is strongly advocated, and humanization has always been regarded as a measure to evaluate good design. However, looking back at the concept of humanization, it one-sidedly emphasizes the role of one party and separates the environment from people. Some current humanization mainly emphasizes the impact and role of the environment on people, confusing the primary and secondary relationship between demand and supply. We should explore human needs and take meeting people’s most essential needs as the principle. This paper takes Gestalt psychology as the evaluation standard and takes the campus environment of Northwest A&F University as a case study to discuss the importance of humanized scale in campus environment and students’ mental health.

2. Gestalt

At first, the author did not fully understand the theory of Gestalt psychology. However, through after-class study and reference to a large number of papers, the author has more or less formed my own understanding of the concept of “Gestalt”. First of all, it refers to an interconnected whole. In terms of the environment and students, it means that the two are mutually integrated and connected. It is not that the construction of the environment is for students, but that the two interact as part of the whole. The whole is the premise, and then the mutual integration and perception within the whole.

Secondly, there is perceptual awareness in “Gestalt”, which transforms from physical to psychological through the five senses, triggering the special emotions accumulated by people in various specific situations from childhood to adulthood. It should be added that, independent of human beings relative to materials and the external environment, through people’s intentional or unintentional structure and connection (which is certainly based on the full structure of intuition, perception and feeling) [2], and with the coordination between things, we can achieve an environment that adapts to people, is subordinate to people, and is dominated by people. Such an environment, under the coordination of human-oriented scale, is harmonious and comfortable in both material and spiritual aspects outside the human body.

Thirdly, due to people’s own feeling and perception of the outside world, their exploration of the outside world, and the effect of the “100,000 whys” thinking, there is subjective rules and classification. This level still emphasizes the adaptability between the external environment and people.

Finally, at the visual level, the external environment has a physical guiding and stimulating effect on people. These stimuli and the psychological attraction formed by internal effects are mainly through visual impressions, which instantly form memories and accompany people, resulting in long-term recognition, or even indifference or disgust due to excessive stimulation or lack of interest. When the scale fluctuates beyond the controllable range, people will have the opposition between correct and wrong feelings.

Returning to this paper, in conclusion, the original intention of the campus environment should be all beneficial and no harmful. In the current social atmosphere that emphasizes individuality, the campus environment should meet the psychological and emotional needs of each student as an individual, and at the same time balance and adapt the large group of students with the large group of the school.

3. “Gestalt” Linkage of Campus Environment

Take Northwest A&F University as an example. The overall campus environment of the university is harmonious and unified, creating a strong historical atmosphere. Visually, its unified colors and simple styles create a “green” space, giving people absolute visual comfort. Various architectural landscapes in the campus, as well as the proud vegetation and greening, further render a strong atmosphere of “agriculture” and “forestry”. (Figure 1)

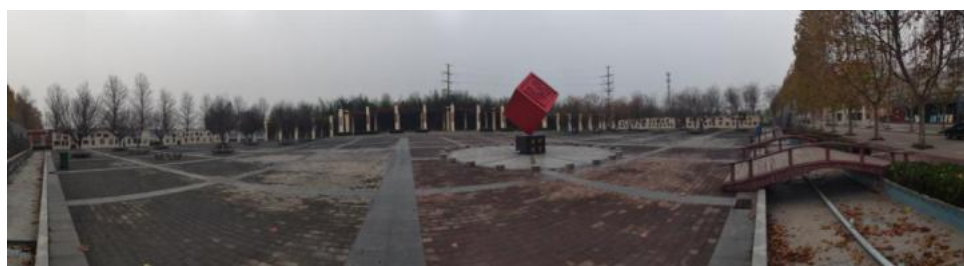


Figure 1. A corner of Northwest A&F University campus.

However, as a “double first-class” modern university with “211” and “985” status, this historical atmosphere seems to form an absolute opposition and deterrence with students. In terms of plants, some vegetation is too large in scale and has a strong historical atmosphere, but it exceeds the visual limit of students, creating a sense of depression for them. In addition, the unreasonable layout of some landscapes in the campus and the lack of lighting effect in some areas at night reduce the overall cohesion of “Gestalt”, leading to contradictions.

Moreover, more problems and contradictions are mainly reflected in the decreased utilization rate of some public spaces, and the weakened integrity, continuity and sustainability of space functions. For students’ human needs, the spaces on campus do not meet their needs for privacy, appropriate openness, sense of belonging, safety, and social interaction. From the perspective of a student of Northwest A&F University, most spaces on campus are purely open, lacking undulations, and the unobstructed flat spaces are completely exposed. There are multiple cores in the site, with no obvious primary and secondary cores, lacking centripetal visual attraction and cohesion, making visitors unable to grasp the visual center of the landscape and easily ignoring it. In terms of space, there is a lack of shelter, privacy and safety. [7] The lack and drawbacks of space make Chinese students’ inherent yearning for nature, as reflected in the concept of “the Dao follows nature” and “emotions in scenery”, more intense. Students yearn for freedom. Psychologically, some spaces have a strong sense of

enclosure and clear boundaries, which separate the site from the surrounding environment, but also lead to absolute isolation and separation between the two areas, making them have a subordinate relationship rather than a mutually adaptive and supporting relationship.

In general, the campus environment should focus on creating an atmosphere and meeting needs, so that its functions can be diversified, rather than merely serving decorative and aesthetic purposes. Secondly, with the rapid development of the current landscape design industry and the application of some modern technologies, especially since the campus is at the forefront of social progress and development, more new technologies should be introduced to expand the scope of human five senses, making it easier for the environment to enter people's psychology.

4. Interaction between Human Needs and Environment

Human needs are often subtle and delicate. However, as independent individuals, most people like to have a small space of their own in public environments. This is precisely a problem in Chinese universities nowadays: campuses have become clusters of buildings, separated from nature, with an imbalance between use and demand. (Figure 2)



Figure 2. (REDMI K30 PRO ZOOM AI QUAD CAMERA) *A corner of Northwest A&F University campus.*

In terms of individual needs, people need personal space with privacy and territoriality. Personal space is a buffer zone against potential physical and emotional dangers, a space for self-protection, preventing over-stimulation and excessive arousal, and supplementing privacy to avoid physical harm from others. Privacy is a spatial feature that controls information exchange and hides solitude, and it is the control and choice of communication and lifestyle, including visual privacy, auditory privacy, and sensory privacy [3]. Territoriality refers to the space occupied by individuals or groups to meet certain behavioral or psychological needs. In the campus environment, territorial spaces can be divided in different ways and scales, such as a set of fixed seats, a private room, or an activity site. Such divisions are based on meeting people's psychological needs [4].

In addition, different individuals have different requirements for campus spaces, which makes campus spaces need to be diverse while meeting needs. There is also collectiveness: nowadays, many outings are basically based on dormitories as the main unit. Therefore, under these basic material needs, there is a relatively clear standard for space: it should be both large and small, able to accommodate a variety of numbers of people, meet privacy needs, and be more natural than architecture [3].

The environment serves people, and people use the environment to meet their needs. Under the interaction, the cognition and development of the whole school are promoted. Of course, the whole school has potential subconscious influences, such as enhancing the sense of belonging, historical sense, and reverence [6]. The initial cognition rises from the original feeling to the spiritual level, satisfying the spiritual blank and weakness of college students in their ideological and conscious level nowadays. Some parts have a reverse effect on the whole, making the whole more integrated.

5. Conclusions

As college students, we are all young people who have just grown up. Psychologically, we need a space of our own to think about life, calm down, vent, and make noise. In addition, universities themselves are shaping students' habits of independent learning and thinking. Combining these two aspects, designers need to fully consider students' actual needs in campus environment and landscape design, and provide private spaces for them to study independently, think independently, and express personal emotions freely.

Perceptual awareness combined with humanized needs and participation includes two meanings: one refers to shape or form, i.e., the nature of objects; the other refers to any separate whole. Gestalt psychologists believe that any "form" is a structure or function actively organized or constructed by perception. It emphasizes the positive initiative of perceptual activities and holds that the whole is not equal to the sum of parts. [8] The research results of Gestalt psychology, especially the research on the principle of figure and background, have important theoretical guiding significance for architecture and urban design [2].

Group activities in threes and fives are one of the biggest characteristics of college students' outdoor activities. College students not only carry out collective learning and discussion in classes and academic activities, but also show collectiveness in life. Therefore, campus environment and landscape design should fully consider this characteristic of collective activities and create multi-level and multi-angle environmental landscape spaces to meet college students' collective needs. Privacy: the principle of university campus environment and landscape design. University campus environment and landscape design should provide spaces for teachers and students with different uses such as study and life, so as to relieve their psychological pressure and enrich their outdoor activities. The design of campus environment and landscape directly affects the mental and physical health of teachers and students. This requires designers to deeply explore college students' psychological states, find and summarize design principles suitable for their psychological needs, and provide a theoretical basis for future university campus environment and landscape design [1,9].

Throughout the paper, it mainly discusses students' psychological needs and the potential role of the environment, and emphasizes and implies the existing problems in current campus landscapes. However, as students, our ideological and professional awareness is still not high enough. But from the perspective of artists and designers, we have learned a lot: to design better and propose imaginable university campus environment and landscape designs, which are based on facilitating the formation and expression of emotions, and to address the scale issues in university campus environment and landscape. Finally, a model of university campus environment and

landscape design that meets the psychological needs of teachers and students is proposed.

On the one hand, we should improve teachers' and students' understanding of university campus environment and landscape design, establish a harmonious relationship between teachers, students and the campus environment; on the other hand, we should take the initiative to choose and control the environment, and constantly optimize ourselves to adapt to the environment. Through the two-way interaction between teachers, students and the environment, we can gradually achieve a dynamic balance between psychology and the environment, which is environmental psychology [1,5].

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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References

- [1] Zhang, W.H. The Importance of Environmental Psychology to Campus Landscape Design. *Science and Technology & Innovation*, 2016, 05, 32+34. DOI: 10.15913/j.cnki.kjycx.2016.05.032.
- [2] Liu, L.L.; Ma, J.W. Application Analysis of Gestalt Psychology-related Theories in Landscape Design—A Case Study of Landscape Design of Yuyang Mountain Section by Taihu Lake. *Urban Architecture*, 2019, 16(28), 192-194. DOI: 10.19892/j.cnki.csjz.2019.28.043.
- [3] Deng, P.; Qiu, C.H. Interaction and Sharing—A Case Study of Public Space Construction in West Campus of University of South China. *Chinese and Foreign Architecture*, 2009, 01, 97-100.
- [4] Gao, C.Y.; Yue, L.R.; Wang, L. Study on Campus Cognitive Map of Harbin Institute of Technology. *Shan Architecture*, 2011, 37(03), 12-14. DOI: 10.13719/j.cnki.cn14-1279/tu.2011.03.054.
- [5] Li, P.C. A Brief Discussion on the Application of Environmental Psychology in University Campus Landscape Design. 2014. Dalian Polytechnic University, MA thesis.
- [6] Li, L. Research on the Application of Behavioral Psychology in University Campus Environment and Landscape Design. 2007. Nanjing Forestry University, MA thesis.
- [7] Lv, H.; Guo, X.N. Application of Gestalt Psychology in Interior Design of Concept Bookstores. *Design*, 2019, 32(15), 142-144.
- [8] Zhou, S.G. College Students' Mental Health Education from the Perspective of Gestalt Therapy. *Education and Vocation*, 2015, 22, 86-88. DOI: 10.13615/j.cnki.1004-3985.2015.22.029.

- [9] Zhang, L.J. et al. Interpretation of Humanized Design of Landscape Space Based on Environmental Psychology. *Modern Horticulture*, 2020, 43(13), 147-149. DOI: 10.14051/j.cnki.xdyy.2020.13.074.



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