

# *Educational Guidance for Freshmen Majoring in Art and Physical Education in Colleges and Universities*

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**Abstract:** The ultimate purpose of education is to cultivate people, so students are in the main position in the educational ecosystem. The growth ecosystem of college freshmen is based on the development of the main body of college freshmen. It analyzes the relationship between many environmental factors inside and outside the university and their growth and development. The goal is to make Each factor exerts the greatest positive effect, helping college freshmen to smoothly adapt to the change of study lifestyle in the higher education stage, and better serve the growth and success of students. This paper mainly studies the educational guidance of freshmen majoring in arts and sports in colleges and universities, and analyzes the current situation of college freshmen's adaptability problems. The research shows that among the reasons for college freshmen's learning adaptability problems, family factors account for 36% and school environment factors account for 36%. 38%, and personal psychology accounts for about 26%, which indicates that the reasons for the learning adaptability problems of freshmen tend to be diverse, and cannot be considered alone.

## **1. Introduction**

With the transformation of higher education to mass education, the number of college students has increased sharply, and the society has paid more and more attention to the college students. University, as the last stage of individuals leading to society, is an important transition period for realizing socialization, and it is also an important turning point in life. However, for college freshmen, most of them leave their families for the first time, and the original social relations develop with the distance. And weakening, when the external environment in which it is located has undergone major changes and lacks sufficient support, it is easy to cause various problems due to incompatibility with the new environment [1-2].

In her research on freshman education, Orhan argues that formal architectural education is not enough for students in a current dynamic world where visual content and speed have become decisive factors. Non-formal education methods should be used to complement formal education in

acquiring the required skills and developing knowledge [3]. The requirements, importance, and practical methods of informal education are emphasized to make the educational process of freshman architecture students more efficient. Malhotra focuses on design and implementation at the freshman curriculum level. Reliability tests were conducted to assess the internal consistency between student learning attitudes, student engagement behaviors in the classroom, and acceptance of technology [4]. In addition, the effect of gender differences was also analyzed.

The main purpose of this paper is to analyze and study the educational guidance of freshmen majoring in art and physical education in colleges and universities. This paper mainly analyzes the definition of college freshmen and the characteristics of this special group of college freshmen; analyzes the predicament of the education and guidance of freshmen majoring in arts and sports, and proposes an individual fitness value estimation strategy for adaptability; At the same time, it investigates and analyzes the current situation of the adaptability of freshmen majoring in arts and sports.

## **2. Research on the Background of Educational Guidance for Freshmen Majoring in Art and Physical Education**

### **2.1 Characteristics of College Freshmen**

#### (1) Advantageous features

1) The vision is more open and the acceptance ability is strong. Most college freshmen in the new era were born in the early 2000s. The government, schools, and all sectors of society have been paying more and more attention to higher education. The "post-00s" college freshmen can enjoy abundant educational resources and excellent education in the process of growing up. environment, while broadening their own knowledge reserves, their vision becomes wider, and it is easier to accept and adapt to new things [5-6].

2) Diverse values, positive and healthy mainstream ideas. The "post-00s" college freshmen grew up in a period when the world's multi-polar characteristics were highlighted, the country's economy, politics and culture were developing rapidly, the opening of the country, the development of the market economy, and the advent of the "Internet +" era. At the same time of cultural edification, they are also subtly influenced by foreign cultures. The influence and impact of multiculturalism make their values diversified.

3) Pursue growth and have a strong sense of subjectivity. The "post-00s" college freshmen, who are mainly only children, bear the attention of the whole family. As the focus of the whole family, they have shown obvious self-consciousness since childhood. They are relatively independent in thinking, and they continue to enhance their self-development, and actively pursue the realization and improvement of its own value.

#### (2) Insufficient features

1) Cognitive ambiguity, over-reliance on the network. With the development of the Internet and the advent of the era of big data and "Internet +", the Internet has deeply affected the way "post-00s" college freshmen acquire cognition. They obtain knowledge and information through the Internet. However, the transitional network dependence makes The way they acquire cognition presents virtual features and lacks a sense of reality. With the accumulation of time, it is easy to lead to the weakening of emotion, the weakening of actual communication ability, and the poor interpersonal communication [7-8].

2) The ideals and beliefs are weak, and the ideas are utilitarian. The three views of "00" college freshmen are affected by the impact of multiculturalism and many factors. They tend to ignore the exploration and analysis of ideals and beliefs, and their ideals and beliefs are relatively weak.

3) Too selfish and weak team awareness. The "post-00s" college freshmen, as only children,

have been self-centered since childhood and have a weak sense of teamwork. At the same time, the excessive expansion of self-consciousness makes it difficult for them to adapt to the collective life. Facing the dormitory environment where many people live, they will have a strong sense of discomfort, and interpersonal problems in collective communication will follow.

## 2.2 The Predicament of College Freshmen Education Guidance

### (1) Weak awareness of governance at the freshman level

First of all, college freshmen have a sense of independence, but their own needs are vague, their rational thinking is still immature, and their development goals are not clear. Secondly, under the background of the test-oriented education-led environment, most college freshmen tend to focus on the social demand, employment rate or salary treatment of their majors when they enter the university. Students admitted to popular majors have high expectations and one-sided expectations. Awareness leads to the feeling of conflict between ideals and reality after study, loss of professional interest, and lack of professional recognition. Finally, due to the combined influence of traditional culture and administrative mechanisms, some new students have low ideological and political awareness, generally have less social experience, and have utilitarian consciousness and ideological confusion [9-10].

### (2) School-level governance capacity is limited

First of all, the school is affected by the external environment and its own reasons, ignoring the role of ideological and political team building. Second, the education management system for freshmen needs to be optimized urgently. Colleges and universities fail to accurately recognize the particularity and importance of freshman training, as well as the necessity of institutionalizing college freshman education management. Many colleges and universities have not incorporated the management of freshman education as a key management work into the school's constitution and system. Finally, the education mechanism for all employees is not perfect. At present, the education management of freshmen is more concentrated on college management departments and counselors, and professional teachers are relatively less involved in the education management of freshmen. The guidance for freshmen's ideological awareness lacks pertinence and effectiveness, and does not effectively use their own The advantages of professional knowledge and training education cannot fully reflect the dominant position of students, which leads to the low degree of support and participation of freshmen in educational management work [11-12].

## 2.3 Individual fitness value estimation strategy

Let  $V = \{X^1, X^2, \dots, X^n\}$  be the set of decision variables, and  $\text{Dom}(X^i) = \{x_{i1}^1, x_{i2}^1, \dots, x_{in}^1\}$  be the value range of the decision variable  $X_i$ , then the decision space  $\Omega = \{\text{Dom}(X^1) \times \dots \times \text{Dom}(X^n)\}$ . Assuming that the preference directed graph constructed according to the user interaction behavior has  $L$  layers in total, the contribution of the hierarchical distribution to the decision variable  $X_j$  is:

$$C_1(X^j) = 2^{(\text{class}(X^j)-1)} \text{class}(X^j) \quad (1)$$

$X_i$  is the  $i$ -th evolutionary individual,  $X_j$  is the  $j$ -th decision variable, and  $\text{class}(X_j)$  is the number of layers of the current preference directed graph. If a decision variable has not yet appeared in the current preference directed graph, set the contribution value to  $\text{class}(X_j)=1$ .

Using the Bayesian inference formula for reference, the user preference is calculated using the preference possibility information. Let  $X_i = \{x_{i1}^1, x_{i2}^2, \dots, x_{in}^n\}$ , its user preference degree based on the conditional preference table is denoted as  $\pi(X_i)$ , and the specific expression is as follows:

$$\pi (X_i) = \prod_{j=1}^n \alpha_{j,i,p}^{class(X^j)}(x_{ij}^j) \quad (2)$$

Where  $\alpha_{j,i,p}^{class(X^j)} x_{ij}^j$  represents the preference of attribute value  $x_{ij}^j$ . Incorporating the level of contribution, the defined evolutionary individual fitness value estimation strategy is shown in formula (3).

$$F(X_i) = \prod_{j=1}^n 2^{(class(X^j)-1)} class(X^j) \alpha_{j,i,p}^{class(X^j)}(x_{ij}^j) \quad (3)$$

### 3. Research on the Direction of Educational Guidance for Freshmen Majoring in Art and Physical Education

#### 3.1 University Freshman Growth Ecosystem

Analyze the elements and functions of the system, and establish a structural model of the college freshman growth ecosystem based on the relationship and mechanism of action, as shown in Figure 1:

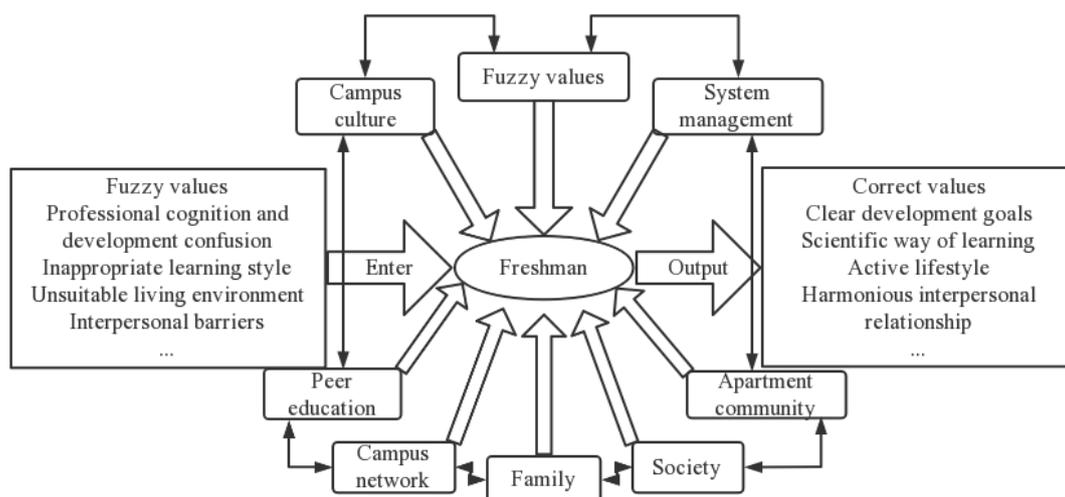


Figure 1: Schematic diagram of the growth ecosystem of college freshmen

Due to the objective differences in many aspects between basic education and higher education, freshmen who have just entered university study and life are faced with many problems, such as vague values, confused professional cognition and development, unsuitable learning methods, and unsuitable living environment. Problem With the entry of freshmen into the college freshman growth ecosystem, the college freshman growth ecosystem plays an educational guiding role through various environmental elements, creating a good atmosphere for the growth and development of college freshmen, and effectively promoting the comprehensive and healthy growth and development of college freshmen. The final output is Qualified college students with correct values, clear development goals, scientific learning methods, active lifestyles, harmonious interpersonal relationships, and excellent performance in ideas, knowledge, and abilities.

#### 3.2 The Scientific Concept and Rational Principle of Freshmen Education Guidance

(1) Establish a scientific guiding concept

1) Internal development

It is necessary to clarify the direction with the concept of green development, gather strength with the concept of coordinated development, and ensure vitality with the concept of innovative development.

The governance of the growth ecosystem of college freshmen is to seek balance in dynamic development, and the ecosystem itself needs to seek development through innovation in many aspects such as concept, content, institutional mechanism, and mode carrier. In the process of building the growth ecosystem of college freshmen, it is necessary to maintain and carry forward the valuable experience accumulated over the years in the ideological and political education work of college students, but also to constantly reform and innovate, make practical moves, seek practical results, and break through the bottlenecks encountered in development. In addition, the goal of college freshman growth ecosystem governance is not only to ensure the comprehensive and healthy growth of college freshmen, but also to lay a solid foundation for cultivating high-quality talents who adapt to the development trend of the times and have innovative consciousness and ability.

2) External meaning

Expand new horizons with an open development concept. It is beneficial for students to expand their international horizons, pay attention to the intersection of disciplines, and advocate multiple linkages. Respond to new expectations with a shared development concept. Co-construction is the way to share, co-construction is also the process of sharing, and sharing is the direction and goal of co-construction. In the process of college freshman education guidance, multiple subjects need to participate together, contribute the most in the process of participation, and jointly create the best ecological environment for the growth and development of college freshmen. This is the process of co-construction.

(2) Establish reasonable basic principles

1) The principle of systematization.

System theory believes that to understand a thing, it is not only necessary to know its constituent elements, but also to clarify the relationship between the elements. The growth of college freshmen is a complex systematic project, which needs to be grasped from a macro perspective by using systematic thinking. The first is to strengthen the top-level design of the growth and development of college freshmen. The second is to make a good overall plan for the growth and development of college freshmen. In addition, the principle of systematic thinking also needs to strengthen the unified leadership of the growth of college freshmen, mobilize all forces, and form a joint force to promote the healthy growth of college freshmen.

2) The principle of controllability.

The educational guidance of college freshmen is designed by people in a scientific way, and has an attribute different from the natural ecosystem, that is, ecological controllability. In order to ensure the stability of the ecological network structure of the growth ecosystem of college freshmen and the sustainable development of the entire system, it is necessary to strengthen scientific intervention and regulation.

3) The principle of symbiosis.

In the process of development and evolution of an ecosystem, there is often a trend of negative decrease and positive increase, and the fitness of the two types of effects increases. In the process of governance of the growth ecosystem of college freshmen, we should focus on understanding various ecological elements and phenomena from the interdependence and active cooperation between things. The symbiosis in the growth ecosystem of college freshmen is manifested in the interaction between the subject and the environment on the one hand, and the interaction and role of various factors on the other hand. In the process of college freshmen education guidance, legitimate

and reasonable competition should be encouraged, the enthusiasm of each subject should be effectively mobilized, and students should be better self-realized and grown in a good symbiotic competitive environment.

4) The principle of balance.

As far as the education guidance of college freshmen is concerned, the input into the system are freshmen whose knowledge, ability and quality have not reached the standards of reliable builders and successors, and due to the examination-oriented orientation of basic education, many students have difficulty adapting to university study and life in many aspects. After the "processing" of the growth ecosystem of college freshmen, it is necessary to carry out all-round education and training for students, so as to lay a solid foundation for colleges and universities to send qualified and high-quality talents to the society. The principle of balance requires that the growth ecosystem of freshmen must be adjusted and managed, adapt to the social and economic environment in a dynamic way, and establish a dynamic and balanced growth ecosystem of freshmen.

**4. Analysis of The Current Situation of The Adaptability of Freshmen Majoring in Art and Physical Education**

Through the survey, most counselors believe that the freshmen they bring have problems of learning adaptability, which shows that the adaptability of college freshmen is a common situation and should be paid attention to. In terms of understanding of learning adaptability, the data has the following analyze.

**4.1 Reasons for the Problems of New Students' Learning Adaptability**

The reasons for the problems of freshmen's learning adaptability tend to be diversified. In the questionnaire, the reasons for the problems of freshmen's learning adaptability were investigated, and some data were obtained as follows Table 1:

Table 1: Reasons for the problems of college freshmen's learning adaptability

Reason	Proportion(%)
Family Factors	36%
School environmental factors	38%
personal psychology	26%

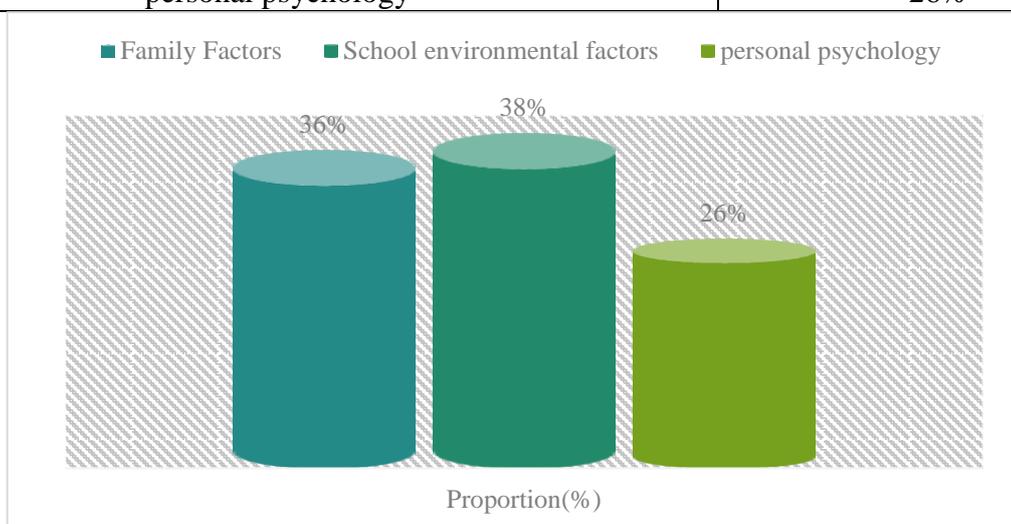


Figure 2: Analysis of the proportion of causes of college freshmen's learning adaptability problems

From Figure 2, it can be found that family factors account for 36%, school environment factors account for 38%, and personal psychology accounts for about 26%, which indicates that the reasons for the learning adaptability problems of freshmen tend to be diverse, and one cannot be considered alone. the elements of. In the design of the questionnaire, considering the reasons for the problems of learning adaptability of freshmen, it is to find out whether the degree of adaptability of freshmen to the environment has reached a balance. From the questionnaire data, the proportion of family factors and school environment factors is relatively high, which is the result of changes in the family environment and school environment on the individual behavior of freshmen.

#### 4.2 Analysis of Adaptability Problems of freshmen and School Help

According to the survey data of freshmen in some undergraduate colleges, we made simple statistics on the proportion of various adaptability problems of freshmen and the proportion of links that the school failed to help. The specific data are shown in Table 2:

Table 2: The proportion of new students with various adaptation problems and the proportion of schools not helping to alleviate them

adaptive problem	Percentage of students encountering problems	Percentage of schools not relieved
love problems	13%	72%
Economic issues	25%	58%
interpersonal problems	24%	68%
Life issues	27%	54%
learning problems	56%	43%

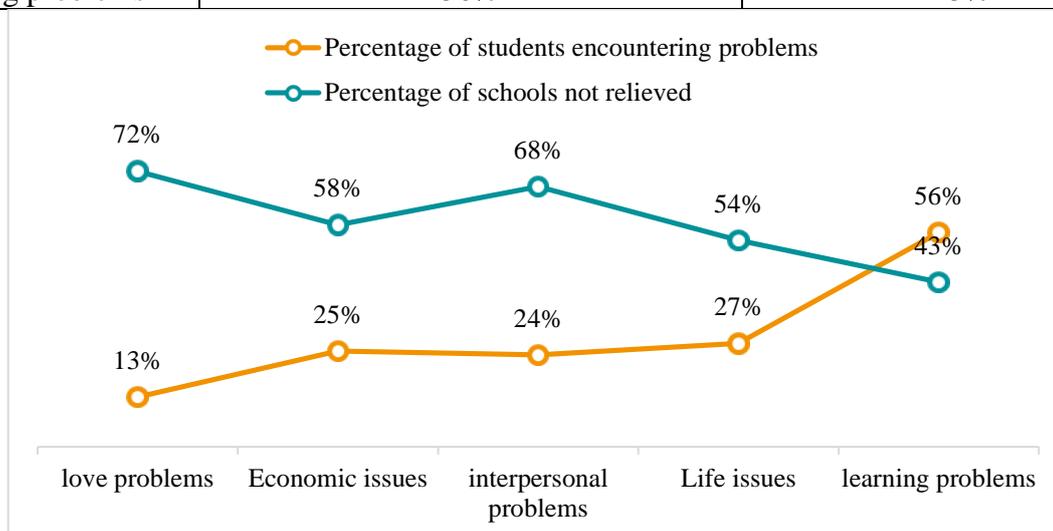


Figure 3: Analysis of the proportion of adaptation problems and the proportion of schools not helping to alleviate them

Analysis of Figure 3 shows that the proportion of learning problems encountered by freshmen after entering the school is the highest, reaching 56%, followed by life problems and interpersonal problems, accounting for 27% and 24% respectively, and the proportion of schools that have not helped to alleviate them is high. Among them, 43% are learning problems, 54% are life problems, and 68% are interpersonal problems.

#### 5. Conclusions

The problems of college freshmen's study and life caused by the connection of education need to be solved by correct education guidance. The governance of the growth ecosystem of college freshmen is a realistic choice to solve. The practical exploration of the development of education is also the meaning of promoting the comprehensive reform in the field of education. This paper analyzes the theory of college freshman growth ecosystem governance, and clarifies the relationship and symbiotic relationship between college freshman growth ecosystem environmental factors, college freshmen, and ecological environment factors. Fully mobilize the participation of multiple subjects, urge them to form a joint force to promote the growth and development of college freshmen, and artificially regulate and optimize the ecosystem. A high-quality and efficient college freshman growth ecosystem has far-reaching significance for the growth and development of college freshmen, as well as for the sustainable development of education and society.

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