

# *Labor Education of College Students in the Context of Internet Plus*

Liang Li\*

Ankang University, Ankang, Shaanxi, China  
guanzhongdashi@163.com  
\*Corresponding author

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**Abstract:** Labor education is the key way to realize the development of people's comprehensive quality, and it has a unique position in the development of people's comprehensive quality and ability. In order to solve the shortcomings in the labor education of college students in Internet plus, this paper, on the basis of the education discussion on Internet plus, the content of college students' labor education and the concept of "Internet plus education", briefly discusses the collection of questionnaire samples and the activity recommendation based on Internet plus student users, and investigates the labor education of college students in this context. The survey data shows that 27.58% of teachers and 32.2% of students think that the overall situation is biased. And from the three aspects of student side, school side and social side, it has constructed a labor education platform for college students in the context of Internet plus, which provides valuable reference for carrying out labor education for college students.

## 1. Introduction

With the arrival of the "Internet plus" era, colleges and universities, as the cradle of cultivating and delivering socialist builders, should especially strengthen labor education, promote the progress and development of labor education in colleges and universities under the "Internet plus" era, and help college students buckle the first button in life.

Nowadays, many scholars have carried out a lot of practice in college students' labor education through various technologies and system tools, and have also made certain research achievements through practical research. Vivian believes that labor education means that schools pass special labor courses, and labor practice education is the main link to improve the quality of the educated. This paper discusses on the existing key problems and influencing factors of the labor education of college students in the new period, and then puts forward some countermeasures for the mutual promotion and development of the labor education and quality education of college students. Through specific system formulation and specific implementation of network environmental protection guarantee countermeasures [1]. Sublet C believes that labor education can help cultivate new people of the times and shoulder the heavy responsibility of rejuvenation; It will help them transform and upgrade to an applied university. Comprehensive labor education is mainly

concentrated in professional practice courses and second classroom practice education in universities. In the process of integration, there are still weak links such as weakening labor education, insufficient value orientation, lack of formal integration, and lack of teachers. To promote the integrated education of "labor specialty" in colleges and universities, the principles of equality, interlocking and mutual promotion should be followed [2]. Sublet C investigated the online learning situation of "college students" through questionnaires, induction and deduction; "Internet plus"; The times, find out the problems and analyze the significance of the "times"; "Internet plus"; Innovative education and teaching in universities; "Internet plus"; The exploration of the theory, educational mechanism, teacher team construction and educational teaching methods of innovative education in the era universities has explored and constructed a "century" college students' labor education innovation management platform [3]. Although the research on labor education is very rich, there are still some limitations.

In order to scientifically understand the existing problems of college students' labor education and propose solutions, this paper, based on the analysis of college students' labor education and Internet plus, through questionnaire survey, uses collaborative filtering algorithm to recommend activities to platform users, and learns that the effect of labor education in the context of Internet plus is not ideal. Through improving students' ideological understanding of labor education, further clarify the purpose of labor education; Through the construction of the "Internet plus" college labor education resource system, it has realized the big data and information exchange among colleges, students and social enterprises, and further enriched the information, carrier and means of undergraduate labor education resources.

## **2. Labor Education of College Students in the Context of Internet Plus**

### **2.1 Internet+**

Internet plus is a new trend of network development. It is the evolution of the Internet and the new economic and social forms it breeds under the promotion of innovation 2.0 in a knowledge-based society. It is a new development model integrating communication network, technology, intelligence and many other technologies [4]. "Internet plus" is a further practice of network thinking, which represents new and advanced production relations and promotes the continuous change of social and economic forms. "Internet plus" can not only achieve mobile interconnection and sharing, but also realize data mining, integration and optimization in various industries, promote an open and innovative economy, pass on endless opportunities, drive the change and development of social production and lifestyle, and provide a broader platform for change and innovation [5].

### **2.2 Labor Education for College Students**

(1) Labor concept: labor concept refers to people's understanding and cognition of labor. Through specific labor, people can improve their understanding, so as to promote people's further understanding of labor and form a systematic cognition of labor. The concept of labor is the premise to guide people's specific practical activities, and only with the guidance of the concept can specific behaviors occur [6].

(2) Labor attitude: refers to people's relatively stable psychological tendency towards labor formed on the basis of ideology, including labor cognition, labor emotion and labor intention. People's cognition of labor, their love and dislike of labor, and their acceptance and rejection of labor behaviors are all labor attitudes [7].

(3) Labor skills: labor skills education is to train college students to master basic production

skills, and its purpose is to train students to master certain labor skills and labor technology, and serve social construction [8]. The final foothold of labor education needs to return to the cultivation of skills.

### 2.3 Characteristics of Network Education

The basic education mode of "Internet + Labor education" is based on "Internet + education", with learners as the central subject, supplemented by the teaching platform, teachers and learning content. These four subjects interact to form the following interactive model diagram (Figure 1). Internet + education has the following characteristics:

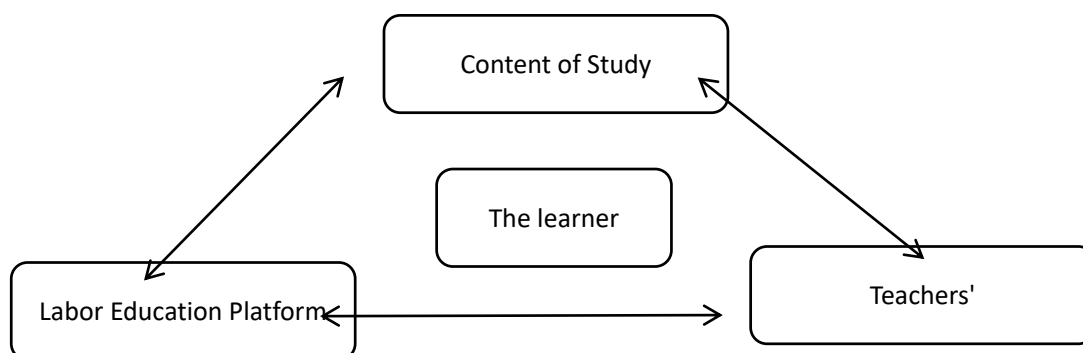


Figure 1: Internet + Labor education model

(1) Time and space are unlimited: synchronous teaching has freedom in space, while asynchronous teaching has greater freedom in space and time. On the one hand, the Internet education system can complete all the processes of internal and external education; On the one hand, you can connect to the network at anytime and anywhere, and you can freely select course content [9].

(2) Repetitiveness: because Internet plus education resources can be preserved and accumulated for a long time, and Internet plus education resources will continue to be added and enriched. Internet plus stores rich high-quality education resources, providing the possibility for people to repeatedly use information resources for a long time [10].

(3) Openness: Internet plus educators emphasize learning, not teaching as traditional education models emphasize. Internet plus education is an open learning model that transcends time and space constraints [11].

### 2.4 Micro-course design mode

In the design of labor micro-class, we should analyze students' learning needs, put forward problems, plan the course content with goals, and make the class content multi-faceted and diversified. Figure 2 shows the micro-course design model based on problem solving.

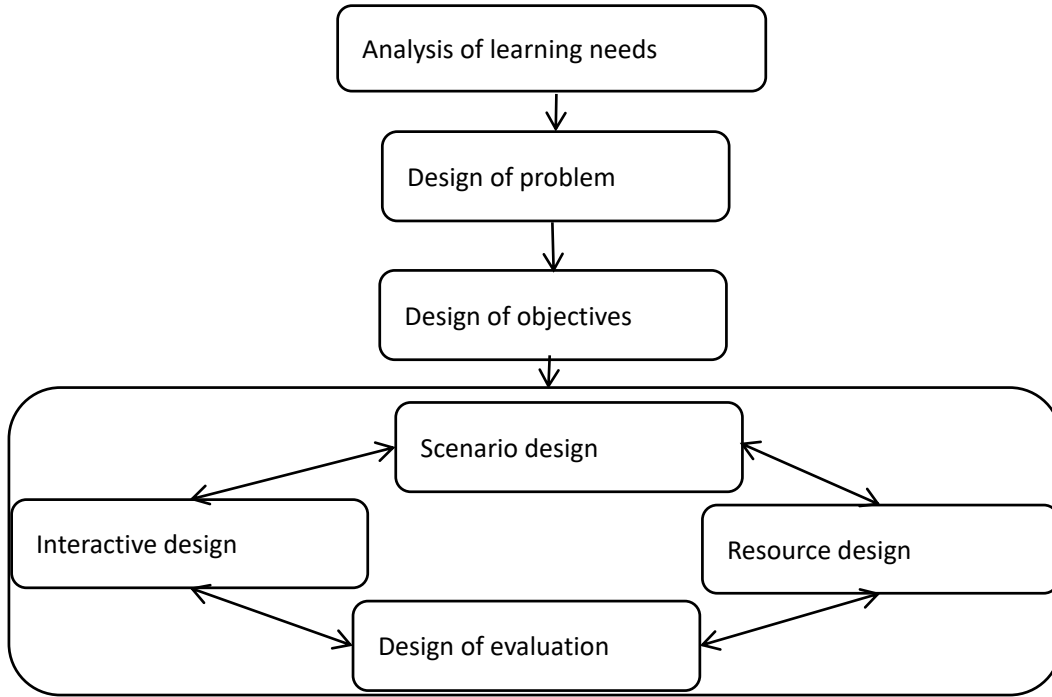


Figure 2: College students' labor education micro-class model

### 3. Investigation and Research on Labor Education of College Students in the Context of Internet Plus

#### 3.1 Collection of Questionnaire Samples

In this paper, the members of the project team of "Research on the Reform of College Students' Labor Education Work in the Context of Internet plus" in a province have investigated and studied the labor education teachers at five levels, namely, ordinary undergraduate colleges, independent colleges or private undergraduate colleges, and vocational colleges. Select representative colleges and universities to distribute and collect 550 valid questionnaires according to the "five levels", which constitutes the total number of samples for this survey and analysis.

#### 3.2 Activity Recommendation Based on Internet+ Student Users

The collaborative filtering algorithm in this paper recommends activities to users of the Internet plus learning platform, mainly in three steps:

(1) Get data. Obtain the user's evaluation value of labor activities to construct the user behavior preference matrix. This matrix is expressed as  $G$ , as shown in Formula (1):

$$G = \begin{bmatrix} G_{11}, G_{12} \dots G_{1x} \\ G_{21}, G_{22} \dots G_{2x} \\ \dots \dots \dots \\ G_{y1}, G_{y2} \dots G_{xy} \end{bmatrix} \quad (1)$$

Where,  $y$  is the number of users,  $x$  is the number of labor activities, and the value of matrix element  $G_{rt}$  is the score of user  $r$  on labor activity  $k$ . If  $G_{rt}$  is within a certain range, the larger

$G_{rt}$  is, the higher user  $r$ 's evaluation of labor activity  $k$  is, and vice versa.

(2) Find the nearest neighbor user set. The correlation between target user  $k$  and users is generally measured in the following ways:

1) Cosine similarity method: suppose that the scores  $r$  and  $k$  in the  $x$ -dimensional labor activity are expressed as vectors  $\vec{r}$  and  $\vec{k}$  respectively, then the formula for calculating the correlation between user  $r$  and user  $k$  is:

$$S(r, k) = \cos(\vec{r}, \vec{k}) = \frac{\vec{r} \bullet \vec{k}}{\|\vec{r}\| \|\vec{k}\|} = \frac{\sum_{t=1}^x G_{rt} * G_{kt}}{\sqrt{\sum_{t=1}^x G_{rt}^2} \sqrt{\sum_{t=1}^x G_{kt}^2}} \quad (2)$$

2) Modified cosine correlation method: the formula for calculating the correlation between user  $r$  and user  $k$  is:

$$S(r, k) = \frac{\sum_{t \in U_{rk}} (G_{rt} - \bar{G}_r)(G_{kt} - \bar{G}_k)}{\sqrt{\sum_{t \in U_r} (G_{rt} - \bar{G}_r)^2} \sqrt{\sum_{t \in U_k} (G_{kt} - \bar{G}_k)^2}} \quad (3)$$

Where,  $U_{rk}$  is the set of labor activities scored by user  $r$  and user  $k$ ,  $U_r$  and  $U_k$  represent the set scored by user  $r$  and user  $k$  respectively, and  $\bar{G}_r$  is the score of user  $r$  on labor activities;  $\bar{G}_k$  is the score of user  $k$  on labor activities.

(3) Generate recommendations. After determining the close set of key users, recommend the appropriate labor activity set for users according to the project evaluation and prediction score.

## 4. Exploration and Research on College Students' Labor Education Practice in the Context of Internet Plus

### 4.1 Survey on the Overall Situation of College Students' Labor Education in the Context of Internet Plus

This questionnaire has designed questions to count the current development of labor education. Teachers and students "What is the overall evaluation of the use of online teaching of labor courses in your university?" Through the exploration of the three problems, we found several problems in the current labor education curriculum. This paper focuses on the overall situation evaluation, as shown in Table 1.

Table 1: Statistics of Overall Situation Evaluation Questionnaire

Option	Teacher	Student
Excellent	5.28%	6.17%
Good	28%	31%
Secondary	43.29%	45%
Poor	27.58%	32.2%

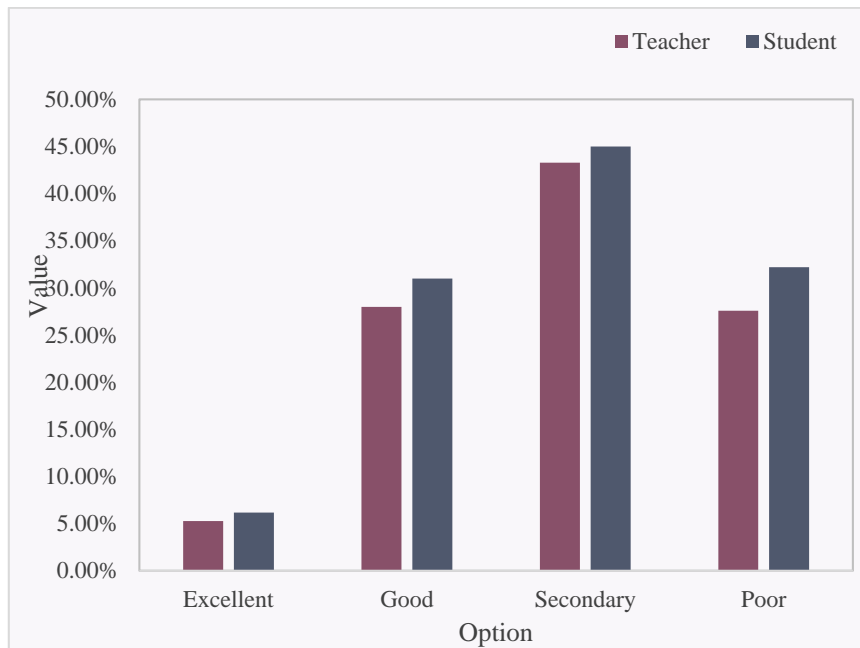


Figure 3: Comparison of Statistical Data of Overall Situation Evaluation Questionnaire

According to the survey results in Figure 3 that 5.28% of teachers and 6.17% of students think the overall situation is excellent, 28% of teachers and 31% of students think the overall situation is good, 43.29% of teachers and 45% of students think the overall situation is moderate. 27.58% of teachers and 32.2% of students think that the overall situation is biased, therefore, from the overall data; we can see that teachers and students' views on the overall use of online teaching of labor courses are not ideal. Therefore, we should consider what factors lead to this situation, and build a more effective labor education platform for college students in the context of Internet plus.

#### 4.2 Building a Labor Education Platform for College Students in the Context of Internet Plus

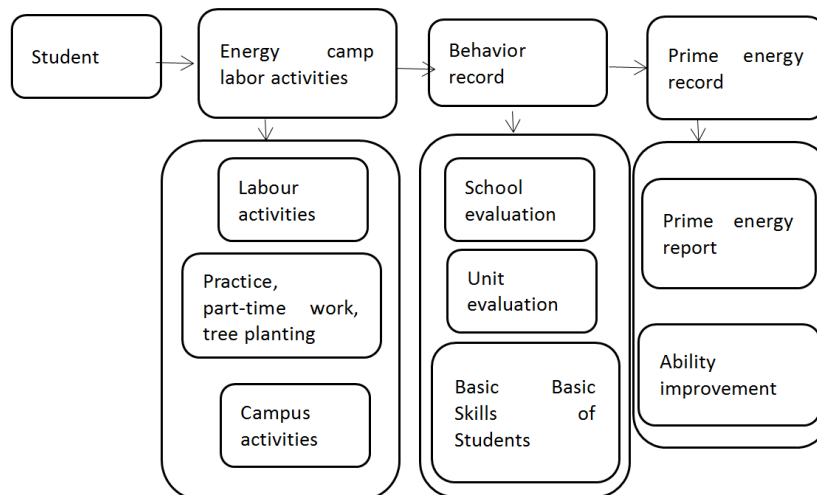


Figure 4: Learning process of labor education in student platform

In order to put the realization theory into practice, the "labor activity alliance" college students' labor education platform is developed. The school will release the labor activities organized in the school on the platform, so that students can participate in the activities in time. The enterprise has

set up the release activity of the "labor energy camp" section of the platform. The platform shows the labor education activities of college students in the form of part-time warehouse, internship warehouse, employment warehouse, commonweal warehouse, entrepreneurship warehouse, and community warehouse. "Students can choose to register according to their own interests, free time and other factors.

(1) Student side: students can use mobile Internet tools to log in to the "Super School Alliance" college student labor education platform. Through specific analysis, we can provide students with professional labor activity information push according to their interests, majors, grades, etc.

Figure 4 shows the process of students' participation in labor activities. By participating in labor activities on the platform, such as large-scale labor practice activities, part-time labor, tree planting activities, etc., students will form real records after the activities, including the evaluation of schools or activity units. According to the real situation of students' practice and the third-party evaluation, the labor ability and literacy of students are transformed and accumulated through the data model, and finally a radar chart of students' labor ability and literacy is formed. Help students understand themselves and improve themselves purposefully.

(2) School side: The school can log in to the college students' labor education platform through the background. The platform provides colleges and universities with functions such as labor activity release, online student enrollment statistics, and offline activity on-site sign in, student labor activity statistical analysis, student labor achievement evaluation statistics, etc., to help the school's all-round information construction of labor education.

(3) Social side: through the "Super School Alliance" college students' labor education platform, labor activities can be published online. Students can participate in the practical activities of government, industry and enterprise organizations through online registration and offline participation. The government can release information on important social labor activities through the platform, such as tree planting activities, social labor activities, street part-time activities, social labor knowledge sharing activities, etc., to expand students' participation in social activities, and activity units can release information on labor activities through the platform.

## 5. Conclusions

Combined with the composition of labor education and college students' labor education under the concept of "Internet plus education", the questionnaire survey method was used to conduct a data survey on the overall situation of college labor teaching in the Internet. The survey data found that there were many deficiencies in college students' labor teaching. Therefore, this paper built a college students' labor education platform from the student side, school side and social side through Internet plus education. By pointing out the implementation path of college students' labor education in the context of "Internet plus", the importance of college students as the main body, school intervention, comprehensive social cooperation, and comprehensive strengthening of labor education is expected to be applied in school management.

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