



# Research on the Construction of Mental Health Education System for Higher Vocational Students Based on Computer Software Analysis

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**Abstract.** From the current overall situation analysis, psychological service has played a positive role in improving students' comprehensive quality. However, due to the unbalanced distribution of resources, imperfect organizational structure, unscientific operation mechanism and unclear process of specific matters, the whole psychological service system has some problems of setting and disability. In order to change this reality, colleges and universities need to establish a sound organizational system, clarify the post responsibilities of all kinds of personnel at all levels, so that they can form a person responsible for their own responsibility, smooth organization and leadership, implementation measures, feedback and correction functions, so as to make the mental health work of vocational college students develop smoothly. This paper studies the mental health of vocational college students by using IP computer analysis software.

**Keywords:** Computer software analysis · Vocational colleges · Students · Mental health · Service system

## 1 Introduction

With the diversified needs of society, the psychological state of higher vocational college students has a new development and breakthrough, the whole emotional tone and value orientation have changed, which requires further innovation of mental health education and psychological service research [1]. At present, mental health work is expanding from psychological counseling to mental health education and service with richer connotation and more clear objectives, which is the inevitable trend of the development of mental health service in higher vocational colleges.

## 2 Analysis on the Current Situation of Mental Health Education for Students in Higher Vocational Colleges in China

### 2.1 Significance of Mental Health Education

At present, the emergence of psychological counseling institutions or psychological counseling classes in higher vocational colleges is springing up. Based on the theoretical basic knowledge, psychological health education for college students is practiced.

However, there are still problems and deficiencies in the mode of mental health education in higher vocational colleges. Mental health education is divided into positive goal education and negative goal education [2]. Negative goal education is to prevent abnormal psychology and treat bad psychological behavior. Positive goal education is to construct the best positive psychological state in an effective environment. Effective development of positive psychological education can improve students' psychological quality, promote the cultivation of sound personality, and build students' psychological quality as a whole.

## **2.2 The Goal of Mental Health Education is not Clear**

From the perspective of positive psychology, it is to cultivate students' positive and optimistic attitude, and have a positive attitude towards life and problems. For a long time, the psychological education in higher vocational colleges is aimed at the special groups, adopting the method of eliminating psychological barriers, aiming at the students with abnormal psychological activities. The goal is to control the psychological crisis, and the main task is to resolve the psychological conflict of students. Generally, it takes the form of a unified deployment in the psychological counseling center, one-time screening, for students' psychological status from the surrounding teachers and students. This form only stays at the superficial stage, which ignores the importance of prevention and psychological guidance, and does not fully understand the psychological development process of students.

## **3 Construction of Dynamic Monitoring System of Mental Health of Vocational College Students Based on Computer Software Analysis**

Computer software technology provides a new research method for mental health education, and provides a realistic basis and feasible guarantee for serving mental health education in Higher Vocational Colleges and realizing dynamic monitoring of students' mental health.

Based on the analysis of computer software, the mental health data monitoring of vocational college students should include traditional manual monitoring and computer system monitoring. The behavior data collected without the students' knowledge is the most real. We need to collect students' personal data based on social media. In the era of network information, a large number of students' social media users publish their daily life behavior records and emotional changes on the Internet, and even some psychological changes that they do not pay attention to will be shown on the network. Social platforms such as SMS, Weibo, wechat, QQ, post bar and other social platforms will generate information, posts, comments, messages and other data every day. All content and usage behavior on the network can be tracked and recorded. This kind of tracking record can provide the most real and comprehensive behavior data source for mental health monitoring.

At the same time, we also need to collect students' social activity behavior records. Nowadays, the development of technology can record the behavior track of individual

social activities in detail. In the school, there are traces of students' campus card consumption, book borrowing, attendance in class, examination failure, student loan, participation in campus activities, etc. collecting these information can comprehensively and systematically reflect the behavior rules and characteristics of college students, So as to predict the mental health of students.

The RF propagation loss in free space is shown in Formula 1. Where  $L_{fs}$  is the transmission loss,  $d$  is the distance between transceivers (in km), and  $f$  is the frequency of wireless signal (in MHz).

$$L_{fs} = 32.44 + 20 \log d + 20 \log f \tag{1}$$

The transmitting power range of RF module can be calculated, see formula 2. Among them,  $P_t$  is the transmitting power of RF module,  $P_r$  is the receiving sensitivity of RF module, and  $G_t$  and  $G_r$  are the antenna gain of transmitter and receiver respectively [3].

$$P_t \geq P_r + L_{fs} - G_t - G_r \tag{2}$$

In the actual design, the RF module uses a spring antenna with a gain of 3 dBi, and the maximum receiving sensitivity can reach 124 dBm. According to the formula, the transmitting power of RF module should be guaranteed at 20 dBm.

## 4 The Effect of Positive Psychology on the Mental Health of Vocational College Students

### 4.1 Integrating the Function of Mental Health Education

The research direction of positive psychology not only focuses on guiding psychological problems, but also focuses on the prevention of mental health. The positive and healthy education can effectively control and manage their own emotions, so as to solve the students' mental health problems. Positive psychology should be encouraged to find

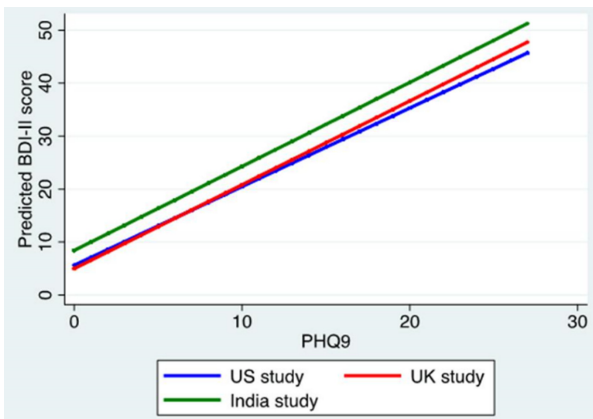


Fig. 1. Prediction simulation of mental health education

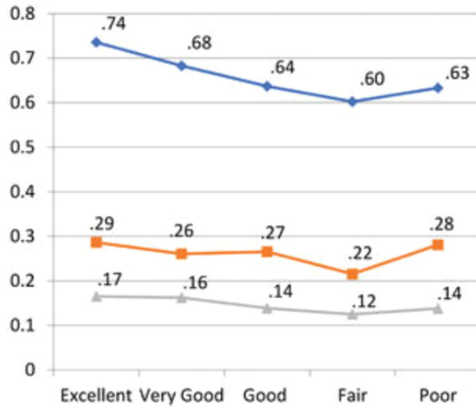
positive attitude towards students. Integrating the content of mental health, aiming at the negative factors in mental health, cultivating their own positive quality. The function of integrated mental health education is shown in Fig. 1.

#### **4.2 Deepening the Reform of Mental Health Education**

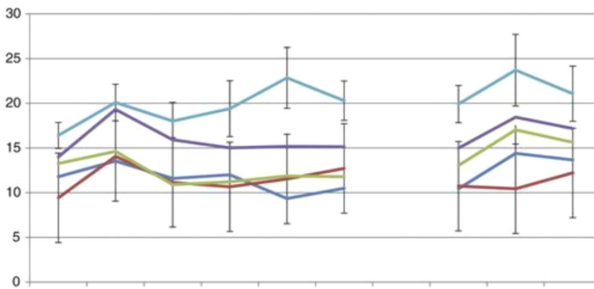
The traditional mental health education is basically a process of diagnosis and correction [4]. Only when there is a problem or a feeling of psychological changes, can we begin to pay attention to mental health [5]. The guidance of positive psychology for the development of mental health is based on a good mentality, through positive psychological counseling to improve students' psychological quality and promote the development of mental health. Positive psychology encourages the cultivation of excellent qualities, such as self-cultivation and temperance, wisdom and knowledge, courage and kindness, selflessness and justice, kindness and empathy, etc., so as to construct the subjective positive psychology of the individual, and to feel the happiness and pleasure from the heart. Positive psychology is the direction of psychological reform. In a positive state, psychology can shape a good personality and better establish the healthy psychology of vocational college students [6, 7].

#### **4.3 Expand the Way of Mental Health Education**

The overall quality development of students can not be separated from positive psychological education. However, as an individual, each student comes from different regions, has different family background and different social experience. Therefore, mental health education needs to choose the best method flexibly according to the actual situation. We should popularize the propaganda of mental health education on campus, organize mental health activities regularly, and carry out effective mental health education for students by means of mental health discussion, psychological counseling, psychological training and psychological suggestion [8]. Positive psychology education is not aimed at the treatment of psychological diseases, but focuses on exploring the positive and healthy quality in the individual's heart, giving full play to students' own potential, seeking ways to guide students' mental health from multiple perspectives, and infiltrating positive health concepts. Teachers should not only impart mental health knowledge, but also expand educational approaches in various directions to transmit positive energy to students, Shaping positive psychological quality. Figure 2 shows the prediction simulation of mental health education. Figure 3 shows the statistical simulation of mental health education.



**Fig. 2.** Prediction simulation of mental health education



**Fig. 3.** Statistical simulation of mental health education

## 5 Countermeasures to Improve the Construction of Mental Health Education System in Higher Vocational Colleges

### 5.1 Broaden the Channels of Mental Health Education for Vocational College Students

Higher vocational students' mental health education is a systematic project. Although it is included in the system, the development of education should not be formalized because of systematization. In other words, the development of psychological education for higher vocational students should not be limited to classroom, lecture or psychological counseling, but should make full use of various resources to expand the channels of psychological health education, so that education can meet the deep-seated needs of students. The ways of mental health education can be divided into dominant education and recessive education according to the purpose and content of education. Explicit education refers to those education methods with strong purpose, with clear teaching content and curriculum arrangement. And recessive education is more through the creation of environment or conditions, let the educated rely on self-awareness to adjust their mentality. What Hainan Vocational and technical college lacks now is the supplement of

recessive education to explicit education. Therefore, the author suggests that we should broaden the coverage of recessive education as far as possible on the basis of existing education methods [9].

In the development of recessive education, campus culture is undoubtedly one of the most important communication channels. The promotion of group effect has twice the result with half the effort for college students' mental health. Hainan Vocational and technical college has taken some measures in the construction of campus mental health culture, but it is far from enough. We should further play the carrier role of campus culture in mental health education, and make full use of campus broadcast, publicity window, school newspaper, classroom blackboard, wall and other media to infiltrate mental health education into all aspects of study and life, Let the positive psychology form a kind of atmosphere and breed an invisible educational force [10].

Network construction is also an important channel for recessive education, which is to use virtual technology to make up for the deficiency of dominant education. If conditions permit, the school can set up a special network platform with the theme of mental health education, and ask professional mental health teachers to be responsible for the management and maintenance. On the one hand, it regularly publishes and updates the mental health knowledge closely related to the life, study and employment of higher vocational college students, integrates the news related to the psychological problems of college students at home and abroad, and puts it in a prominent position as the daily front page headline. In addition, the website also needs to set up an interactive section with students. Students can communicate with teachers by email or online consultation. In this way, it can not only solve the students' inner or emotional confusion, but also better protect the students' privacy. Although the effect of online mental health education is good, the premise of this kind of education is to ensure that online teachers have enough time and energy. The website itself is a one to many open platform, so it is impossible for schools to deploy a large number of people to manage the website. Generally, only one professional psychological teacher answers questions online at a fixed time, or several psychological teachers are on duty in turn. There is no guarantee that all students can answer their questions one by one. In order to solve the contradiction between demand and supply, the school should try its best to deploy full-time and part-time psychological teachers, publish some teachers' email, QQ numbers and telephone numbers on the website, and develop a 24-h hotline for students [11].

## **5.2 Strengthen the Construction of Teaching Staff**

At the beginning of the mental health curriculum, most schools will choose ordinary teachers to take up the role of mental health teaching and counseling. Most of these teachers have not received professional training, and the teaching method is mainly experience teaching, that is, to examine the students' psychology with a "past person" mentality, and hope to help students avoid detours by teaching their own life experience. With the aggravation of students' mental health problems, empiricism has been unable to meet the social requirements of school mental health education. In order to solve the problem of students' mental health, some schools began to try to use external introduction or internal training to obtain professional mental health or psychological counseling teachers. Mental health education has also been widely concerned by the society [12].

The standard to measure the professional level of psychological educators first appeared in the United States in the 1960s. The U.S. government has formulated the training standards for psychological educators and issued them to the whole country in the form of documents. Since then, psychological education has become a hot topic. So far, more than 30000 professional mental health educators have been active in the campus, and have made great contributions to the cultivation of the internal quality of talents in the future. This experience of the United States is gradually spreading in other countries, and the specialization of mental health education team will become a trend [13].

### **5.3 Strengthen the Mental Health Education and Training of College Counselors**

In higher vocational colleges, instructors are not only responsible for the management of students' daily study and life, but also understand students' ideological trends. Many years of experience in Ideological and political work is a favorable condition for counselors to engage in mental health counseling and education. Moreover, compared with professional psychological teachers, counselors are closer to students and understand them better, which is not easy to cause students' rejection. Although the number of full-time psychological teachers in Hainan Vocational and technical college is very limited, the number of counselors is very considerable. Moreover, it is not possible to expand the full-time psychological teachers in a short time, so it is feasible to bring counselors into the team of mental health teachers. The nature of the work of counselors is similar to that of mental health teachers, and the most obvious gap is the lack of professional background of psychology. Schools should provide professional and systematic psychological health education theory and skills training for counselors, so that they can master basic psychological counseling knowledge, form a three-level education counseling network with student associations and professional psychological teachers, and solve the problem of insufficient number of psychological health educators in Hainan Vocational and technical college [14].

### **5.4 Continuously Improve the Professional Level of Mental Health Education**

The development of mental health education is a sustainable circular process, and one of the criteria to judge whether this process is effective is whether the professional level continues to improve. In the process of developing school mental health education, many western countries will continue to put forward new requirements for the professional level [15]. The improvement of professional level is mainly manifested in three aspects, the first is the continuous improvement of professional level of employees. As a pioneer in the development of mental health education, the United States not only takes the lead in formulating the training standards for professional mental health counselors. Subsequently, the United States continued to formulate laws and regulations to strictly enforce the admission qualifications of psychological counseling practitioners. According to statistics, in order to become a qualified school counselor in the United States, we must first have a master's degree or above, and hold the employment certificate of the state government method, but also follow the constraints of thousands of professional regulations, which shows its high requirements for specialization; the improvement of the professional level is reflected in the continuous improvement of the psychological

education system. With the highlight of the value of mental health education, many countries have realized that mental health should lay a good foundation, so the psychological counseling course is no longer limited to universities or middle schools, but from primary school, let the mental health education accompany students to complete all their studies. Many European and American countries have put this idea into practice, and may extend the starting point of mental health to the kindergarten stage in the future. The problem of low professional level of mental health teachers in Colleges and universities in China should be solved by improving the industry access threshold.

## 6 The Training Goal of Positive Psychological Education

Many words in life are related to positivity, such as positive, enterprising and so on. As an adjective, positivity is often used to describe those successful people who have the courage to struggle. But the positive behavior is only external positive, positive behavior may be to obtain money and status for the purpose. Positive mental health education refers to a good psychological quality, internal performance and emotion, mentality and other aspects, and eventually become the guidance of behavior. The formation of this kind of good psychological quality is also the goal of mental health education:

1. Positive cognitive quality can be explained in a positive way. As the saying goes, ruler has advantages, inch has short, different people in different fields have different intellectual advantages, and some of this advantage is dominant, some need to guide and mining. Positive psychological education does not advocate to attack the relatively backward individuals with the difference of intelligence, but to see the talent and potential of different individuals through the difference of intelligence. Positive psychological education should guide individuals to recognize their own inherent advantages, help them establish good self-awareness, and encourage them to position their development direction according to their own advantages.
2. People's emotion comes from life experience, rich and complex, which is also reflected in the content of emotional education. Positive emotional quality requires students to understand good and evil, and love and hate clearly. Take love as an example, love can be divided into small love and big love. It can also be divided into love for people and love for things. Active teaching should cultivate students to have good qualities such as loving parents, enterprising, practical and dedicated; positive emotional quality requires students to have a good sense of obligation and responsibility, attach importance to the sense of achievement and honor, and correctly handle the relationship between people and society, between people and nature, and between people; positive emotional quality requires students to be good at discovering the beauty in life and improving subjective well-being, And can grasp the meaning of life.



## 7 Conclusion

To sum up, in order to construct the mental health service system in Higher Vocational Colleges from the perspective of positive psychology, we should have a sufficient understanding of students' current psychological development from the perspective of psychology, introduce the concept of positive psychology into health education, unremittingly promote the general education of College Students' mental health, cultivate a peaceful and healthy mentality, strengthen the psychological counseling work for higher vocational students and strengthen humanistic care. Combining theory with practice, this paper explores the reform measures of positive psychology education, guides students to establish positive values, completes students' objective self cognition education, and builds the school into a stable, United, positive and upward Learning Paradise, and promotes the overall and healthy development of students. In the era of big data technology development, if colleges and universities want to do the psychological crisis early warning work of college students in place, it is necessary to integrate the big data technology with the current psychological crisis early warning methods, conduct data analysis in all aspects, so as to realize the dynamic monitoring of College Students' daily behavior activities, and improve the timeliness of psychological crisis intervention on this basis. When carrying out a series of specific work, we should start from many aspects, comprehensively solve the defects of traditional statistical methods, so as to truly do the psychological early warning work in place.

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