

psychology was affected. The learning cognitive psychology of middle school students in the scale is divided into three kinds: lifelong learning cognition, learning positive psychology and reasonable questioning psychology. The score range of each kind of psychology is 0-100 points, and a corresponding impact grade interval is set every 20 points from 0, corresponding to no impact, slight impact, ordinary impact, obvious impact and huge impact. 200 college students of different majors and genders were selected from a domestic university to adjust and reform their teaching contents according to the idea of lifelong education. The main adjustment direction is to integrate the idea of lifelong learning into the teaching process and pay more attention to cultivating students' ability of independent thinking and analysis. And then let these students accept the post reform teaching service lasting for one semester. Finally, before and after the teaching intervention, the subjects were tested with the scale.

Results: After completing two scale tests and teaching interventions, all valid scale data are counted to obtain Table 1.

Table 1. Statistics of learning cognitive psychological scores of subjects in two tests

Number of tests	Lifelong learning cognition	Learning positive psychology	Reasonable questioning psychology
First test	42.6±3.2	63.0±5.7	55.8±4.2
Second test	74.3±4.1	69.7±3.5	71.9±3.8

It can be seen from Table 1 that at the first test, the subjects' psychological scores of learning cognition were low, and the overall score was about 60 points. However, in the second test after the teaching intervention after the reform, the subjects' lifelong learning cognition, learning positive psychology and reasonable questioning psychology were significantly improved compared with the first test, and the average scores were increased by 41.7, 6.7 and 26.1 respectively, which were within the range of ordinary influence-obvious influence, no influence-slight influence and slight influence-ordinary influence.

Conclusions: In order to explore the impact of the ideas and methods of integrating lifelong education into the higher education system on students' learning cognitive psychology, this research carried out an experiment of higher education curriculum reform integrating lifelong education. The experimental results show that at the first test, the subjects' psychological scores of learning cognition are low, and the overall score is about 60. However, in the second test after the teaching intervention after the reform, the subjects' lifelong learning cognition, positive learning psychology and reasonable questioning psychology were significantly improved compared with the first test, and the average scores were increased by 41.7, 6.7 and 26.1 respectively. The results of the teaching intervention experiment show that the integration of the ideas and methods of lifelong education system in the reform of higher education system can improve students' learning cognitive psychological level, and its effect on students' lifelong learning cognition is particularly significant.

* * * * *

RESEARCH ON ENERGY CONSUMPTION CALCULATION MODEL OF PREFABRICATED BUILDING ENVELOPE SYSTEM BASED ON BIM TECHNOLOGY FROM THE PERSPECTIVE OF EDUCATIONAL PSYCHOLOGY

Yuan Wei

Yongzhou Vocational Technical College, Yongzhou 425100, China

Background: Educational psychology is not only a branch of traditional psychology in the humanities, but also an interdisciplinary subject of traditional psychology and pedagogy, in which the theories and research methods of traditional psychology and pedagogy are widely used. The main research object of educational psychology is the teaching psychology of educators and the learning psychology of educates in educational behavior. Educational psychology can improve teaching methods, stimulate students' learning motivation and assist students to overcome learning difficulties by studying the psychological activities and psychological laws of both sides. Moreover, using the theoretical methods of educational psychology to study and optimize the problems existing in the teaching process will help to improve teachers' teaching ability and the ability to solve complex educational problems. It will also help schools to adjust teaching measures and management models according to research results, so as to improve the quality of education and teaching in schools. The domestic BIM technology started later than the international one, which led to

the rough teaching of civil engineering BIM modeling in domestic colleges and universities, especially in the energy consumption calculation modeling of prefabricated building envelope system. Due to the more complex teaching content, a large number of students could not well understand the teaching content, and cited one example against three. Therefore, this research attempts to apply the content of educational psychology to the teaching of energy consumption calculation model construction of prefabricated building envelope system based on BIM technology, and explore whether this intervention can improve students' positive psychology and learning initiative.

Subjects and methods: Firstly, the research team needs to collect the academic materials in the field of educational psychology and BIM technology teaching published at home and abroad in the past five years, and find out the psychological countermeasures to improve BIM technology teaching. Then, one school with sufficient representation in terms of teaching scale, number of students and teachers' level was found in domestic colleges and universities, and 236 college students of different genders and ages who were willing to participate in the experiment were recruited as research objects. The research objects were divided into experimental group and control group on average. Before starting the follow-up experiment, the basic information of the two groups of students needs to be counted and the difference significance test. The follow-up experiment can be carried out only if there is no significant difference in the basic information. Otherwise, the grouping of research objects needs to be adjusted. In the experiment, both groups were taught the BIM prefabricated building envelope system energy consumption calculation model, but the teaching method used in the control group was the traditional mode. The teachers in the experimental group received professional educational psychology training in advance, focusing on understanding students' learning psychology and using students' learning psychology. The teachers in the experimental group are required to pay as much attention to the students' psychological status as possible in the teaching process, and provide corresponding psychological support services according to their learning status. In addition, before and after the experiment, a BIM technology learning positive psychology questionnaire survey should be conducted for the two groups of students. The questionnaire is designed by the research team according to the teaching content. The questionnaire is a 100-point system. The higher the score, the more obvious the students' learning positive psychology performance.

Results: Make statistics of the questionnaire scores of the two groups of students, and show the metrological characteristics in the form of mean \pm standard deviation, and get Table 1.

By analyzing the data in Table 1, it is found that there is no significant difference in BIM technology learning positive psychological scores between the two groups before the experiment, but the results of the second survey after the experiment show that there is a significant difference in the scores between the experimental group and the control group, and the average scores are 78.4 and 65.2 respectively, an increase of 13.2 in the former compared with the latter.

Table 1. Statistics of BIM technology learning positive psychology scores of two groups of students

Statistical time point	Experimental group (n=118)	Control group (n=118)	t	P
First survey	64.3 \pm 5.1	64.8 \pm 4.8	1.628	2.434
Second survey	78.4 \pm 3.7	65.2 \pm 4.3	0.251	0.003

Conclusions: In order to improve the learning enthusiasm and positive psychology of civil engineering college students in learning BIM energy consumption calculation model of prefabricated building envelope system, so as to improve the teaching level of this kind of specialty, this research is analyzed on the basis of group teaching experiment. The analysis results show that there is no significant difference in BIM technology learning positive psychological scores between the two groups before the experiment, but the second survey results after the experiment show that there is a significant difference in the scores between the experimental group and the control group, and the average scores are 78.4 and 65.2 respectively. The former is 13.2 higher than the latter. It shows that the application of educational psychology theory to BIM modeling technology teaching can improve students' learning interest and subjective initiative. The results of interviews with several randomly selected research subjects show that the main reason for the higher positive learning psychology of the experimental group is that after the intervention of educational psychology is integrated into classroom teaching, teachers can grasp students' learning psychology more accurately and quickly, so as to provide corresponding psychological support when necessary.

Acknowledgement: The research is supported by: Guiding Science and Technology Project of Yongzhou City in 2021 "Research on digitization of whole construction process of prefabricated building based on BIM technology" (No. 2021-YZKJZD-017).

* * * * *

RESEARCH ON THE INFLUENCE OF VOCAL MUSIC TEACHING ON COLLEGE STUDENTS' EMOTIONAL ANXIETY

Fengling Yang

Harbin Normal University, Harbin 150025, China

Background: Anxiety is a common psychological disease, which is mainly caused by excessive worry about the life safety, future and destiny of oneself or relatives and friends. Under the influence of negative emotions such as irritability, nervous panic and worry, abnormal anxiety occurs. Anxiety is mainly divided into two types, namely, realistic anxiety and pathological anxiety. Realistic anxiety refers to an adaptive response of an individual in the face of events or situations beyond his control. Its characteristics are that it has certain adaptive significance, and the intensity of individual anxiety is consistent with the threat of real events. Pathological anxiety refers to a kind of persistent negative emotion without specific reasons. Although there is no practical basis, patients with this kind of anxiety often have a strong sense of nervousness or imminent disaster, mainly manifested in autonomic nervous dysfunction, motor anxiety, impaired social function, subjective pain and other symptoms. Different from realistic anxiety, pathological anxiety cannot disappear with the disappearance of external threats. It is a non adaptive mental disease. For college students, anxiety is a very common mental illness. College students may have serious emotional anxiety under the negative influence of external objective factors or their own subjective factors. As college students are in a critical period of social role transformation, their mental development is not yet fully sound. Therefore, when facing too many threatening events, heavy academic tasks, fierce employment competition, and interpersonal relationships that are difficult to properly handle, they are very likely to have a sense of self doubt or self denial, unable to face and solve a series of learning or life difficulties with a stable state of mind, resulting in anxiety. In the current vocal music teaching in colleges and universities, there are mainly some problems, such as uneven distribution of educational resources, single use of teaching media, lack of integrity of the curriculum system and so on. It is difficult to achieve good vocal music teaching results, let alone effectively alleviate the emotional anxiety of college students.

Objective: The problem of college students' emotional anxiety cannot be underestimated. Serious emotional anxiety will lead to the failure of college students to carry out normal learning activities or social activities, which will hinder the improvement of their comprehensive quality and ability and the maintenance of their mental health level. The research will start from the causes and effects of college students' emotional anxiety, through the optimization of college vocal music teaching mode and other measures, in order to effectively alleviate college students' emotional anxiety, and explore the positive impact of college vocal music teaching on college students' emotional anxiety.

Subjects and methods: In order to accurately and objectively analyze the impact of vocal music teaching on college students' emotional anxiety, 108 college students were randomly selected from the two colleges and universities. Three groups a, B and C were set up for comparative analysis. Each group included 36 college students. The teaching intervention time was set as 3 months. For the college students in group A, vocal music teaching and other intervention methods were not adopted; For the students in group B, the regular vocal music teaching mode is given; The students in group C received the improved vocal music teaching intervention. The Manifest Anxiety Scale (MAS) was used to evaluate and analyze the anxiety of all college students before and after the intervention. SPSS26.0 software and MATLAB software were used as visual analysis tools for evaluation data. If the MAS score of the college students is greater than 40, it means that they are accompanied by serious anxiety; If his MAS score is within the range of 15-40, it means that he is accompanied by mild anxiety. If the MAS score is less than 15, it means that the college student is not accompanied by emotional anxiety.

Results: After three months of teaching intervention, the MAS scores of the three groups of college students showed varying degrees of change. See Table 1 for details. The change of MAS score of groups a student was small, which showed that their emotional anxiety did not deteriorate, but it did not get effective improvement. The MAS score of group B students decreased slightly, indicating that their emotional anxiety symptoms were relieved. The MAS score of college students in group C decreased significantly to about 11.57, indicating that they were no longer accompanied by emotional anxiety.

Table 1. Changes in MAS scores of college students before and after different teaching interventions

Group	Before teaching intervention	After teaching intervention	t	P
A	42.57±2.13	41.98±1.97	1.220	0.227
B	43.08±1.96	28.64±2.11 ^a	30.085	0.000
C	42.86±2.27	11.57±1.85 ^{ab}	64.111	0.000