

as road route design, asphalt pavement comfort or noise, and the pressure caused by current or previous driving conditions may affect the generation of driving fatigue. For driving fatigue caused by such reasons, the preventive measures of limiting driving time will no longer be effective. The driver obtains about 90% of the information through vision during driving. Due to the great difference between the visual characteristics of the driver at rest and at a certain speed, the visual feeling obtained from the high-speed vehicle is very different from the visual impression obtained at rest. When the car is driving, the depth and width of the field of vision and the picture in the field of vision are constantly changing, and the driver manipulates the vehicle according to the content of the field of vision. Therefore, the external dynamic visual stimulation formed by the road, traffic and environmental conditions within the driver's field of vision is also the main factor affecting the generation of driving fatigue.

**Objective:** There are many factors affecting driving fatigue. As the main influencing factors of driving fatigue, there are road route design and road traffic environment, which are displayed in the driver's field of vision in a dynamic form and play a role. The variability of road traffic environment will affect the formation and development of driving fatigue. Therefore, reasonably designing the variability of road traffic environment can reduce driving fatigue and improve road safety level.

**Subjects and methods:** With the rapid development of highway and urban road construction in China, the number of malignant road traffic accidents is increasing year by year. Among them, the frequency of traffic accidents caused by fatigue driving is high and the loss is serious. Aiming at the problem of driving fatigue of motor vehicle drivers, the driving fatigue level achieved by drivers can be determined in a certain way, and the judgment rules are given. This paper mainly studies and analyzes the influence effects from the three aspects of its own characteristics, vehicle characteristics and operation lines.

**Study design:** 500 drivers were randomly interviewed by interview analysis method to understand the effects of road route design and asphalt pavement comfort on alleviating driving fatigue for drivers with behavioral disorders. The visit time for each person is about 15-25 mins.

**Methods:** Excel is used to count the effect of road route design and asphalt pavement comfort on alleviating driving fatigue for drivers with behavioral disorders.

**Results:** The characteristics of operating bus drivers mainly include the driver's gender, age, marital status, whether there are children, driving age, driving ability, the time from the driver's last operation, the driver's work and rest habits and personal eating habits, and the nature of the passenger transport company to which the driver belongs, which will affect the degree of driving fatigue relief. The characteristics of the vehicle driven by the driver mainly include the length of time the vehicle is put into operation, the origin of the vehicle (domestic or imported) and the information about the performance of the vehicle, which will also produce different effects. The basic condition of the operation line, the type of horizontal, vertical and cross section of the road, the pavement type, the landscape setting on both sides of the road, the traffic flow on the road, the driving speed, the operation time, the natural environment where the operation is located, etc.

According to the survey results, the influence values of specific factors are quantified in five grades of 0-4. 0 means irrelevant, 1 means slight influence, 2 means general influence, 3 means obvious influence and 4 means full influence. The specific statistical table is shown in Table 1.

**Table 1.** Effect of road route design and asphalt pavement comfort on alleviating driving fatigue for drivers with behavioral disorders

Factor	Own characteristics	Vehicle characteristics	Operation line
Driver	4	4	4

**Conclusions:** Reasonable design of the variability of road traffic environment will be a better method to reduce driving fatigue and improve road safety level. However, with the increase of driving time, the driver's adaptability will weaken the impact of the variability of road traffic environment. Therefore, in order to put forward quantitative design suggestions, it is necessary to further study the impact of the change degree of road traffic environment on the driver and the driver's adaptation time to the change.

\* \* \* \* \*

## EDUCATIONAL FUNCTION AND COMMUNICATION ADVANTAGES OF THEMATIC PHOTOGRAPHY IN THE 5G ERA BASED ON EDUCATIONAL PSYCHOLOGY

Linsong Guan

*School of Photograph, Communication University of China, Nanjing, Nanjing 211172, China*

**Background:** Educational psychology is the study of human learning, the effect of educational intervention, the psychology of teaching, and the social psychology organized by schools. The focus of educational psychology is the application of psychological theories or research to education. Educational psychology can be used to design courses, improve teaching methods, motivate students to learn, and help them cope with the difficulties and challenges of growing up. The terms “educational psychology” and “school psychology” are often used interchangeably, but usually those engaged in theoretical work and research prefer to be called educational psychologists, while those engaged in practical work in schools or related places are classified as school psychologists. Educational psychology focuses on how students learn and develop. In practical work, special attention is paid to students with special educational needs (whether they are gifted children or children with emotional or behavioral problems).

The 5th Generation Mobile Communication Technology (hereinafter referred to as 5G) is a new generation of broadband mobile communication technology characterized by high speed, low time delay and large connection, and is a network infrastructure for human-machine interconnection. The International Telecommunication Union (ITU) defines three broad categories of 5G applications, namely, enhanced mobile broadband (EMBB), ultra-high reliable low-delay communications (URLLC) and massive machine-class communications (MMTC). Mobile broadband (EMBB) shall be enhanced mainly for the explosive growth of mobile Internet traffic to provide mobile Internet users with a more extreme application experience. Ultra-high reliability and low delay communication (URLLC) shall be mainly geared to the application needs of vertical industries with extremely high requirements for delay and reliability such as industrial control, telemedicine and autopilot. Massive machine-like communication (MMTC) shall be mainly geared to the application needs for smart cities, smart homes, environmental monitoring and other sensing and data collection purposes. To meet the diverse requirements of 5G application scenarios, the key performance indicators of 5G are more diversified. ITU defines the 5G eight key performance indicators, of which high speed, low delay, large connection is the most prominent feature of 5G, user experience rate of 1 Gbps, delay as low as 1 ms, user connectivity capacity of 1 million connections/square kilometers.

**Objective:** Photography has been widely used in various fields of social life, and has become an indispensable technical means and artistic form in human life. Based on the research of psychology, photography can not only meet people’s psychological needs, but also has a close relationship with people’s production, life and study. Photography education is more and more popular in higher education. There are the following aspects: help to train students’ aesthetic ability and good moral sentiment, help to train students’ hard-working spirit, help to train students’ observation ability, help to train students’ innovation ability.

**Subjects and methods:** Photography is the product of the development of modern science and technology, with a history of more than 150 years. The emergence of photography has a great psychological impact on people. It has changed all aspects of our lives. As a comprehensive art, photography has a wide range of connections with fine arts, music, literature, philosophy and psychology. Randomly selected 100 professional photographers between the ages of 20 and 30, of whom 35 were female and 65 were male. Before the experiment, the 100 photographers were divided into two groups: control group and experimental group, 50 in each group. And the difference between the two groups of photographers in learning and psychological aspects of the scores did not affect the experimental results. Before the experiment, the researcher explained the purpose and content of the investigation, and conducted the experiment on a voluntary basis. In the experiment, the subjects in the experimental group were photographed with the 5G theme based on educational psychology, while the subjects in the control group were photographed with the common 5G theme. All the data were collected, summarized and analyzed by SPSS3.0 statistical software.

**Results:** The satisfaction before and after the two groups was counted, and the specific results are shown in Table 1.

**Table 1.** provides statistics on the satisfaction of both groups

Group	Unsatisfied	Commonly	Basically satisfied	Satisfy
Experimental group	0	8	16	26
Control group	8	26	10	6

Experimental results show that photography activities based on educational psychology are more popular and have higher satisfaction.

**Conclusions:** With the intervention of educational psychology, photographers can not only cultivate their sentiment, improve their ability of aesthetic appreciation and innovation, but also achieve the goal of aesthetic education and quality education. What’s more, the practice of photography not only trains the

practical ability of the photographer, but also educates the photographer in aesthetic appreciation and creation as well.

\* \* \* \* \*

## APPLIED RESEARCH ON EDUCATIONAL PSYCHOLOGY IN PHYSICAL EDUCATION TEACHING MODEL REFORM

Li Shang

*Physical Culture Institute, Xianyang Normal University, Xianyang 712000, China*

**Background:** With the development of education, especially the rapid development and change of knowledge, science, and technology as well as the economic and social situation, the social demand for talents has changed from a single knowledge-based talent to a comprehensive talent, especially for the talents with special skills. The social demand is increasing. In traditional physical education teaching, the proportion of punishment and criticism to students is much higher than that of praise and encouragement according to the teaching methods in accordance with the teaching materials, which leads to the lack of motivation of students to learn and the phenomenon that students prefer sports to physical education. Regular criticism and education not only dampen students' learning enthusiasm, but also directly reduces students' interest in physical education, and affects the effect and quality of physical education. Educational psychology from the students' psychological starting point, the students affirmed more than negative, encourage more than criticism, so that students can establish self-confidence, enhance interest in learning. Therefore, in today's college education, in the face of the lack of interest in traditional physical education, the relevant parties should integrate educational psychology into college physical education to stimulate college students' interest in physical education.

**Objective:** From the point of view of educational psychology, people's psychological need for encouragement and support is far greater than that of whipping and criticism when confronted with difficulties and adversity. This is especially true for college students. College students' psychology is in the key period of transition from a simple and easily irritable period to a sound and mature period, which will be influenced by the guidance or criticism. The essence of psychology of encouraging education is to promote growth by stimulation, to promote improvement by emotion, and to educate children by love and life so that they can cultivate tenacious faith in understanding and tolerance, and find the correct way of growth through patience and appreciation.

**Subjects and methods:** Along with the continuous deepening of PE curriculum reform, many excellent teaching ideas, new content, reasonable countermeasures and comprehensive evaluation forms have been applied to PE teaching, and achieved excellent results. The rise of educational psychology abroad provides a new teaching idea and method for the reform of physical education curriculum in our country, and brings great inspiration to physical education teachers. Combining educational psychology with PE teaching, we can excavate students' positive personality quality, increase students' positive emotional experience, construct positive organization and environment, urge students to develop themselves consciously and actively, lay a foundation for themselves to experience a happier life, and cultivate the consciousness of lifelong PE.

**Study design:** Interest in learning plays a direct role in students' participation and enthusiasm in sports activities, which determines the speed of students' mastering knowledge and skills. The main objective of this study is to enhance students' interest in sports activities through specific teaching models, to create a positive concept of sports, and to create a positive attitude towards learning and life. **Methods:** 200 students were randomly selected, 100 students were randomly selected as the experimental group, 100 students as the control group, and the two groups had no gender limitation. The experiment period is 1 month. The experimental group combined the knowledge of educational psychology with the reform of PE teaching, while the control group only adopted the normal PE teaching reform mode. The purpose of this study is to explore the effect of educational psychology on the cultivation of students' interest in P. E. learning, and to give P. E. teachers a way of thinking and operation. Questionnaire survey was used in this study. The questionnaire was given out during the first class and the last class, and all of them were given out, filled in and retrieved on the spot. In order to ensure the validity of the experimental data and information, the pre-test of students' corresponding interest in physical education is carried out through the pre-experiment questionnaire. After the experiment, the students' interest in learning PE was tested again with the scale. A total of 200 questionnaires were distributed, 189 questionnaires were retrieved and 182 were valid.

**Methods:** The experimental data were statistically processed by SPSS.