mode of integration of production, study and research of colleges and universities can not only provide effective support for social development, but also supplement funds for colleges and universities. This research mainly analyzes the influence of the choice and realization of the new mode of the cooperation education based on the social psychology background.

Study design: Random selection of university students 500, age unlimited, gender unlimited, professional unlimited. Questionnaire survey was used to popularize the knowledge of social psychology among nearly 500 college students. The content of the questionnaire includes three aspects: the change of talent training goal, the determination of talent training program, and the students' all-round development in the learning process.

Methods: All the data were collected, summarized and analyzed by SPSS 3.0 statistical software.

Results: The results of this survey use the influence values of 1 to 5 grades and specific quantitative factors, 1 indicating irrelevance, 2 indicating slight influence, 3 indicating general influence, 4 indicating obvious influence, and 5 indicating full influence. In order to reduce the relatively large error caused by individual subjectivity in the evaluation, the evaluation values of 500 college students are adopted and the average values are rounded off to obtain the results. The specific statistical table is shown in Table 1.

Table 1. Research on the influence of the selection and realization of the new mode of industry-university-research cooperative education under the background of social psychology

Content	Transformation of talent training objectives	Determination of talent training scheme	All-round development of students
University student	5	5	4

Conclusions: The mode of industry-university-research cooperation in higher education has a long history of application, and now it has more profound implications. Nowadays, under the intervention of social psychology, the cooperative education mode of production, study and research can not only understand the students' psychological needs, meet the students' psychological conditions, improve the students' employment rate, but also strengthen the students' comprehensive quality, promote the students' mental health and all-round development. In the future, we also need to combine practice, explore the students' psychology, constantly explore more operational mechanism of the cooperative education mode, and constantly improve the education level.

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RESEARCH ON AUTOMATIC OCEAN TRAFFIC ROUTE GENERATION BASED ON ANT COLONY ALGORITHM AND POSITIVE PSYCHOLOGY

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Background: Ant colony algorithm is a kind of optimization decision method based on the function of natural ants, which sets a certain number of artificial ants, according to a certain search rule, to obtain the best overall performance path. When an ant forages, different ants choose different paths from nest to food source, but at last, almost all of them find the same shortest path. This is because the ant's search for the shortest path is an interactive process, leaving behind a certain amount of pheromone, and sensing the presence and intensity of the hormone and moving in the direction of the substance's high intensity. These hormones both increase with the number of ants that pass through them and dissipate over time in a functional relationship. Because there are more ants in the shortest path, the accumulation of hormones on the shortest path will be faster than other paths. Using pheromones, the colony communicates information over time, and eventually finds the best route from the nest to the food source.

The research of route auto-generation is to search for the safest and most economical route according to the environment and safety conditions between the sailing point and the destination. The electronic chart platform provides us with the information query function of the sea area, which can automatically obtain the information of the sea area, such as water depth, shoreline, obstruction, no-navigation area, threat area and so on. So, it is feasible to use ant colony algorithm to solve the problem of automatic route generation.

Objective: Positive psychology is not only a revolution in the field of psychology, but also a new milestone in the history of human society. It is a new science that studies the traditional psychology from a positive angle. It adopts scientific principles and methods to study happiness, advocates the positive orientation of psychology, in order to study the positive psychological quality of human beings and pay attention to their health, happiness and harmonious development.

Subjects and methods: Route planning is an important work for sailors. It is necessary to consider the influence of environment, hydrology and weather threat, and try to achieve comprehensive optimization by taking economy, concealment and safety as three indexes. This not only needs to carry on the drawing work, but also because people's thinking is influenced by time and environment, they often think carelessly or inconsistently, and finally appear the inactive phenomenon, which affects the scientific of route making. Based on ant colony algorithm and positive psychology, this study investigates the effect of ocean route auto-generation. Through investigation and analysis, the problems of ACO used in route automatic generation include grid division of sea area, pheromone of grid points, search strategy, updating of pheromone, route selection and route smoothing. Before the calculation of the algorithm model, the initialization parameter matrix is first set: C, that is, the corresponding points of 9 longitude and latitude coordinates, followed by nine ports. A series of parameters should be set in the model, and the maximum iteration number should be set to max = 100, and the number of ants should be m = 15. Step 1: Variable initialization. Sort n port coordinates based on x, y decomposition, if the number of ports is 3, you can get the original matrix of coordinates as shown in Table 1.

Table 1. Original coordinate matrix

	X	Y
City 1	0	120
City 2	120	0
City 3	100	230

Based on the above weighted adjacency matrix, a symmetric matrix D of n can be obtained, where each element represents the distance between the two ports, as shown in Table 2.

Table 2. Symmetric matrices

	Port 1	Port 2	Port 3
Port 1	0	120	100
Port 2	120	0	230
Port 3	100	230	0

Results: Taking positive attitude and maximum profit as the objective function, the model normalizes the finite dimensions of pure return, loading rate, shipping period, transportation cost and average inventory into dimensionless experimental results. Through the MATLAB software running results, the former normalization results closer to L, the latter results show a downward trend, therefore, through a large number of experiments, we can get the conclusion, the former optimization results for the best experimental results.

Conclusions: The application of ACO to route generation can not only greatly improve the speed of route generation, but also reduce the labor of sailors under the intervention of positive psychology, and at the same time, it can consider all kinds of factors comprehensively, which may not produce the situation of careless consideration as the artificial generation. More importantly, it can embody the various ideas of experts through search rules, so that the generated route has the thinking of experts.

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REFORM AND PRACTICE OF COLLEGE ENGLISH TEACHING PARADIGM BASED ON EDUCATIONAL PSYCHOLOGY

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