

UNIVERSITY EDUCATION AND THE DEVELOPMENT OF PEOPLE'S INNOVATIVE LITERACY- A SOCIOLOGICAL INVESTIGATION BASED ON UNIVERSITY LIFE

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Abstract

This study designs a questionnaire based on the components of college students' innovative literacy in the relevant research. at the same time, knowledge structure, innovative consciousness and thinking, cognitive ability and personality characteristics. In terms of the specific contents of the questionnaire, it includes the influence of college life and learning on students, as well as the daily communication practice of college students, as well as the influence of college study life on students, including disciplines, majors, courses, academic evaluation and the tradition of rewards and punishments. The research significance of all college students summarizes the theoretical research and related concepts of innovation for both theoretical and practical significance and summarizes that colleges and universities should do a good job in the cultivation of college students' innovative quality, stimulate students' innovative thinking, and let students explore knowledge on their own. solve the problem in different ways, from the survey data of this paper, we can see that the knowledge structure contacted by college students' innovative literacy is more inclined to theoretical knowledge. The proportion of innovative skills knowledge is the lowest, which shows that schools pay less attention to the teaching of innovative knowledge. Secondly, in terms of innovative consciousness and thinking, most students will rely on association to find relevance or solve according to teachers' instructions, and the number of students eager to get answers is also high, while the number of students who follow guidance and case solving is relatively small. while the number of leaders and followers is relatively small, indicating that most students are relatively neutral in expressing their opinions. Finally, in terms of the bottleneck of study and life, most students think that they have encountered bottlenecks in the environmental atmosphere and management system of teachers' teaching and learning evaluation, and these dimensions are at the school management level rather than the students' own level. it shows that there is still some room for improvement in the software and hardware facilities and teachers for the cultivation of innovative literacy in colleges and universities. reference

Keywords: university education; innovation literacy; sociology, human innovation literacy Development.

Introduction

In recent years, China's ability demand for university talents is gradually changing from the mastery and application of existing knowledge to knowledge and practical innovation, On the one hand, China took the leading position in the fourth Industrial Revolution, The demand for talent innovation ability is increasing, Not only to master the previous knowledge application mode, More necessary to make a breakthrough, expand new knowledge from the existing knowledge and find new application directions, This makes the innovation quality of talents become the key training direction of college education; Secondly, in terms of innovation-related research, Scholars' research direction is also gradually divorced from that, The narrow field of linguistics, And gradually changed from theoretical research to practical research, In the research of college students'

innovation literacy is also more concentrated; Whether it is the background of The Times, the expansion of the research field or the social development of college talents, Innovation literacy has become one of the important propositions of scholars' research. From the perspective of the state and the society, Different stages of people bear different roles and values, And a large number of social problems, In addition to those who are currently working in the society, College students also need to participate in the problem-solving work, On the one hand, the ability formation and development cycle of social talents is relatively long, And most of the social talent ability is solidified, innovative thinking is insufficient, The education and the environment that college students are exposed to are more conducive to the cultivation of innovation literacy, The state has also invested a lot of innovative resources into college teaching, And I hope that through a college education, Strengthening China's innovation capacity, And then, to promote the national economic development, Meet the "three-step" strategic logic of education development-knowledge progress-economic growth.

Research objectives

This study is based on the theory of innovation and related concept, with the aim of obtaining the innovation quality of Chinese universities and relevant data; on the other hand, so as to satisfy the feasible way to improve the quality of talent training through summary and suggestion.

Research meaning

The significance of this study can be divided into theoretical significance and practical significance. In terms of theoretical significance, this paper summarizes the theoretical research on innovation and related concepts, the composition and reference, components and characteristics of innovation literacy, and the influencing factors in the development of the concept of innovation literacy, and reviews the relevant research at home and abroad, which can provide a relatively perfect theoretical basis for relevant researchers. In terms of practical significance, this study uses the questionnaire to four ordinary public university students issued questionnaire, and use SP SS21.0 questionnaire survey data processing and visual integration, so as to obtain our college students knowledge structure, innovation consciousness and thinking, cognitive ability, personality characteristics and innovation quality of the bottleneck, on the one hand, can help universities understand the current college students innovation literacy, on the other hand also can provide advice to improve their own innovation quality cultivation effect, and strengthen our university talent innovation literacy level.

Literature review

Innovation and related concepts

The concept of innovation was first proposed by Joseph Schumpeter, which considered innovation as the "reorganization of production factors"; Li Jian (2005) believed that innovation is the thinking mode of college students' breakthrough knowledge and knowledge application framework; in the concept of innovation literacy, Chen Zhen (2019) innovation literacy is a combination of all innovation ability elements and spiritual elements. This paper combined with the existing innovation concept and innovation literacy concept related research, define innovation as "to their own thinking mode, existing knowledge and knowledge existing application of breakthrough thought and behavior", and defined innovation literacy as "including knowledge structure, innovation consciousness and thinking cognitive ability, personality characteristics, and innovation related to psychological characteristics and ability characteristics".

Factors influencing the development of innovation literacy

In terms of innovation literacy, development factors, different scholars have different views, and most scholars agree with innovation literacy, development factors can include physiological factors (low level of cortical activation, cerebral hemisphere asymmetry and low level of prefrontal activation), exogenous environmental factors (family influence, education, group organization, social and cultural influence).

Review of related studies

Review of relevant domestic studies In college students 'innovation literacy problem analysis and develop related research, domestic research can be divided into innovation ability development, innovation ability, college students' innovative characteristics, college students 'innovation ability influence factors, college students' innovation ability environment and motivation and innovation ability develop six types, research subject is relatively extensive, high research depth, theoretical level is good, and a large number of research has practical reference value. In the research in the field of innovation ability cultivation,

Zhao Ying (2018) made an empirical analysis on the training effectiveness of college students' innovation ability, To understand the current situation of college students' innovation ability training and the existing problems, At the same time, a number of methods and means to improve the effect of college students' innovation ability; Chen Zhen (2019) focused her research on a subcategory of college students' innovative literacy, At the same time, the research ability of innovation literacy is taken as the main topic, The influence of gauge-based APT teaching on college students 'research ability was analyzed by data, and the correlation of the influence of APT teaching on college students' research ability and dimensions was inferred, Finally, according to the data, APT teaching can significantly improve the research ability of college students; Chen Bingsan, Li Chunyu and Zhang Fujiang (2018) took applied undergraduate universities as the research objects, This paper analyzes the innovation ability of college students, And finally put forward three ways to cultivate the design and innovation ability, Including quality education, creating education and entrepreneurship education; Zhu Zhengyu, Liu Guixiang, and Zhang Qiangyong (2019) used the literature review method to summarize and integrate the relevant research content, At the same time, it is found that the research on the innovation ability of higher vocational colleges and shipbuilding engineering colleges in China is relatively scarce, Most of them focus on the practical teaching methods of shipbuilding engineering majors, But also from the macro and micro levels, To the current mode of university talent training, And the cultivation effect and way of innovation ability in talent training are integrated. In the research on the field of innovative characteristics of college students,

Review of relevant foreign studies

Compared with domestic research, although foreign research started early, there is a large gap with China in terms of research perspective and research strategy, and the number of research is less than that of China. Meanwhile, the number of foreign research is low in recent years. Therefore, this paper extends the time span of foreign research to the 1980s. From the 1980s to now, foreign related research can be divided into two types: internal and external class research and individual internal and external environment. In the field of research in and outside of class, Hutchinson and Beetle (1992) believe that during the course, The relationship between teachers and students will affect the students' satisfaction with the classroom and the effect of classroom knowledge application and innovation, And then it will have a certain impact on the students' future achievements, It also believes

that timely feedback has a strong correlation with students' cognitive ability in multiple dimensions; HD Shapiro (1993) and programming learning as the research object and analyzed the impact level of classroom teaching strategies and the emphasis on students' innovation ability in programming learning, Finally, all dimensions of classroom learning will significantly affect students' innovation ability and application ability; LisaTsui and He Mingyu (2000) conducted a centralized analysis of the research data obtained in the 1989 Joint Track Survey Program, Focus on the judgment of different teaching mode of teaching methods, And the teaching environment, The degree of influence on students' independent thinking ability and innovation ability, According to the research results of the teaching environment, Significant influence on students' independent thinking ability, The innovation ability is closely related to the subjectivity of classroom teaching. In the field of individual in vitro and in vivo environment research, In his work, Andrew J Elliot (2008), The internal and external environment is analyzed from a psychological perspective, Influence on learner goal construction and innovative literacy, At the same time, we believe that the external environment will affect the learners' information perception and judgment, The impact of the internal environment and the learners' psychological state will be more significant; Chegeni S, Darabi R, Niroomandi M (2016), combined with Stenberg's educational thinking model, Cultivate students' creative thinking, And predict the effect of creative thinking training and students' ability improvement. Generally speaking, the number of domestic research on creative thinking and innovation literacy is relatively rich, and the depth of research is relatively good, while foreign countries prefer to model or investigate and verify a certain group based on a certain theory for a long period, and the verification results are more suitable for theoretical research.

Research methodology

Population/Sample Size

This research is based on related research of the questionnaire design, and in order to ensure the demographic data complete and effective, added the personal information in the questionnaire, finally formed the university education and innovation literacy cultivation association questionnaire, the questionnaire contains knowledge structure, innovation consciousness and innovative thinking, cognitive ability, personality characteristics and innovation literacy bottleneck 5 parts, including the knowledge structure, innovation consciousness and thinking, cognitive ability and personality characteristics. In terms of specific questionnaire content, including the influence of university life and learning for students and college students' daily communication practice, for their own influence, including the influence of university learning life on students including disciplines, professional, courses, academic evaluation and rewards and punishments, daily communication practice influence on students including communication discourse system, social practice and self-personality formation.

In order to ensure the universality of the study data, four public universities in Zhejiang Province (hereinafter referred to as university

The Cronbach's α questionnaire reliability analysis and validity analysis are required before the analysis and summary of the questionnaire data. In terms of questionnaire reliability, this paper used SPSS 22.0 to conduct the whole questionnaire for internal reliability analysis, and obtained the Cronbach's α reliability coefficient of this questionnaire. When the coefficient exceeded 0.7, the reliability can be considered good, and lower than 0.7, the progress cannot support the study.

Result

Data analysis of the knowledge structure of in universities A-university D is the highest, among which the proportion of theoretical knowledge options of efficient C is higher than that in the other three schools, reaching 78.36%, while the number of other universities also accounted for the lowest proportion of 60.71%. Subsequently, in order to determine the overall parameter value of the sample, the probability distribution is tested by the chi-square test, and the specific chi-square test detection statistics.

As can be seen from the data in Table 4-2, the accompanying probability of D knowledge structure between universities A and universities is less than 0.05, which proves that the sample distribution has no significant difference. At the same time, the proportion of theoretical knowledge is relatively high in the current university courses, and relatively speaking, the proportion of other knowledge is less.

Grouping and cross-over analysis

In order to judge whether there are differences between the knowledge structure of different schools and different majors, this paper adopts sampling detection to extract individual samples and adopts cross-list table analysis to judge the association between the knowledge structure. The observed values between different universities are not different, with the highest C observed values and the lowest D observed values, which proves that there is no significant difference in knowledge structure data between different schools; but the observed values of different universities all exceed 0, which proves a significant correlation of knowledge structure between different majors.

Analysis of innovation consciousness and thinking data

In the analysis of college students' innovation consciousness and thinking data, the proportion of options varies in college A-University D, with which the highest ratio of college A, University B and University C are option B "rely on association", while the highest option of college D is "eager to get answer", while option A "Try different methods to get answers" in this question is the proportion of all four schools of 0. Subsequently, in order to determine the overall sample population parameter value, the probability distribution is tested by the chi-square test, and the specific chi-square test detection statistics are shown, Statistical data of university A-university D innovation awareness and thinking card square.

The universities a to colleges and universities D innovation consciousness and thinking accompanying probability is less than 0.05, prove that the sample distribution does not have significant difference, at the same time in the current university course students prefer to option A to option C, and in different methods to get answers and follow the guidance and case solution performance is not obvious.

Grouping and cross-over analysis

In order to judge whether there are differences in innovation consciousness and thinking in different schools and different majors, this paper adopts sampling testing and adopts cross-list and table analysis to judge the association between innovation consciousness and thinking.

Cross-analysis data of innovation consciousness and thinking grouping difference in innovation consciousness and thinking data between different schools, but the observation values of different universities exceed 0, which proves the significant correlation between innovation consciousness and thinking of different majors.

Data analysis of the cognitive ability of college students

In the analysis of college students' cognitive ability data, the overall reflection is shown. As can be seen, option B in University A-University D, option B is higher at 51.37%, 44.44% in the lowest, the highest proportion is University C, 34.73% and the lowest proportion of 26.29%. Subsequently, in order to determine the overall sample-parameter value, the probability distribution is tested by the chi-square test, and the specific chi-square test detection statistics are shown in Table 4-8. Table 4-8 University A-University D cognitive ability card-square statistics

As can be seen, the concomitant probability of cognitive ability from college A to college D is less than 0.05, which proves that the sample distribution is not significantly different. Meanwhile, it shows that the cognitive ability of college students is generally above the average line, and the students with higher and lower cognitive ability occupy the largest proportion of the student group.

Data analysis of personality characteristics of college students

In the data analysis of college students' personality characteristics, the overall reflection is shown. As can be seen from Table 4-10, the number of students in university A and University D is significantly high, among which the proportion of university A and D is higher than that of participants, while universities B and C; Secondly, the leaders and echoed options of universities A to D have a low proportion. Subsequently, in order to determine the overall parameter value of the sample, the probability distribution is tested by the chi-square test. As can be seen from the data, the concomitant probability of D personality characteristics from universities A to universities is less than 0.05, which proves that the sample distribution is not significantly different, and also shows that students' personality characteristics are dominated by planners and participants.

All schools have observations above 0 and high average coefficient, proving that gender and performance have a significant influence on students' personality characteristics. In family, except University C, it proves that students in University C, students in different schools have no correlation between personality characteristics.

Both universities A and university D focus on teacher teaching, academic evaluation, environmental atmosphere and management system, among which universities A and university B have the highest proportion of teachers teaching, university C has the highest proportion of environmental atmosphere, and university D has the highest proportion of management system.

Conclusion and discussion

As can be learned from the questionnaire survey data of this paper, At present, the knowledge structure of college students' innovative literacy is more inclined to theoretical knowledge, The lowest percentage of innovative skills and knowledge, It shows that the school attaches less importance to innovative knowledge teaching; next, In terms of innovation consciousness and thinking, Most students rely on association to find associations or follow the teacher's instructions, The number of students eager to get answers was also higher, The number of students following the guidance and case solving is relatively small, The number of students trying solutions in different ways is 0, It shows that the students' overall innovative and application ability is relatively low, Lack of innovation consciousness; third, Students' cognitive level is around the average line, Students generally believe that they have a higher cognition or a lower cognitive level, On the other hand, the number of students who think their own cognitive level is very good is very small, It shows that college students are generally not confident enough in their

innovation quality; fourth, In terms of the personality data, Most students identify themselves as planners or participants, The number of leaders and attachments is small, It shows that most students are relatively neutral in expressing their opinions; last, In terms of learning and life bottlenecks, Most students think that they have encountered bottlenecks in the teacher teaching and learning evaluation environment atmosphere and management system, These dimensions are all at the school management level rather than at the students themselves, It shows that there is still some room for improvement in the hardware and software facilities and faculty cultivation in colleges and universities.

Suggestions

If colleges and universities want to do a good job in cultivating college students' innovative literacy, they need to stimulate students' innovative thinking, With more open classrooms and more innovative tasks, Let the students explore the knowledge independently and try the application of the knowledge, Students are also encouraged to solve it in different ways, No hurry to provide students with answers; next, Schools should also adjust their own management system reasonably, Optimize the environment and atmosphere, Let the students be in a good atmosphere of innovation, On the one hand, to improve the proportion of practical courses, And to give students more hands-on opportunities and more open practice methods in the practice course, On the other hand, we also need to improve the teaching level of teachers, Let teachers master a more diversified innovative literacy training mode, At the same time, to improve the openness in the curriculum arrangement, And the exploratory, Let the students have more knowledge innovation opportunities when learning the course.

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