

Construction and Practice of Innovative Talent Training (TT) Mode under the Digital Background

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Abstract: With the application of computer information technology, the digital economy has gradually developed and become an important part of the economy of all countries. The most important foundation of digital economy is science and technology, artificial intelligence technology and Internet technology. The maturity and development of these technologies provide new development opportunities for the transformation of the economic structure of the whole society. The quality of talents required by the society is difficult to predict. The orientation of application-oriented undergraduate colleges should not only ensure that graduates have the skill to go TT to the society for one-time employment, but also cultivate their skill to adapt to social changes from the perspective of sustainable development of cultivating innovative talents. Through questionnaire survey, this paper investigates the satisfaction of innovative TT mode under the digital background. The vast majority of investigators show that digital technology can improve their learning efficiency and have very high satisfaction.

1. Background significance

In order to achieve the goal of China's economic development, we must strengthen the development of digital economy through digital means. Training talents is the most basic cause of national development and must be given priority to the guarantee of development. High quality education is an important foundation for our people to realize a better life. Therefore, the cultivation of innovative talents is a key industry in China's digital development and construction. We must speed up the construction and practice of innovative TT mode and improve the quality of digital development of education industry. The cultivation of talents should implement the form of education combined with the Internet, and create a new era of digital talent cultivation by improving the advantages of digital internet education.

Many scholars have studied the innovative talent training mode based on the digital background. Ragab K emphasizes that the digital background calibration technology does not limit the swing of ADC input signal or bandwidth. The simulation results of a 12 bit pipelined ADC show that this technology can improve the signal-to-noise ratio (SNDR) and spurious free dynamic range (SFDR) from 44 and 48 DB to 72 and 86 dB, respectively[1]. Based on the frequency shift basis function generated only from the measured ti-adc output, Qiu y can represent, extract and adaptively subtract three mismatch errors from the ti-adc output, which is very different from the traditional method

(for example, using a set of adaptive FIR filters) [2]. Guo m designed a prototype of seven / eight channel split ti-adc implemented with 28nm CMOS. After calibration of digital background timing deviation, it achieves 54.2-db signal-to-noise ratio and distortion rate (SNDR) [3].

By analyzing the practical significance of innovative talent training, this paper constructs an innovative TT mode, and then investigates the satisfaction of innovative TTmode under the digital background through questionnaire survey.

2. Cultivation of innovative talents under the digital background

2.1 Digital concept

Digitization refers to the process of converting complex information into intuitive numbers and data, transforming these data into code and bringing them into computer operation, which is also called the basic process of digitization. For the whole system of cultivating talents, it is an inevitable choice to follow the development of the digital era and constantly update iteratively, otherwise it will lag behind the development of the world or even be eliminated. While popularizing digitization in talent training, we should also strengthen Cultivation of innovative talents, so it is very important to highly popularize digitization. It is found in the research that enterprises developing in information technology have their own digital application system, breaking their isolation in the form of data, obtaining more, more timely and effective market information and creating greater business value [4].

2.2 Advantages of TT in the digital background

Using digital technology for learning, the advantage of this learning environment is that it not only retains all the functions of the original multimedia technology, but also adds an electronic whiteboard with more powerful functions and more timely interaction. In particular, each student has a tablet computer, which can not only accept learning materials, but also establish contact with the terminals of teachers and students, Achieve the purpose of timely interaction. Teachers' teaching in this digital learning environment has richer teaching forms, stronger teaching atmosphere and more flexible teaching means. Digital learning provides rich teaching resources, integrates richer and vivid audio, video and other resources outside the text, and breaks through the key and difficult points in the limited classroom. Moreover, in the context of digital learning, each student has its own independent tablet computer. Students can use the diversity of personal computers to interact with their unique expressiveness and appeal, break the constraints of class and time and space, expand students' knowledge and improve their enthusiasm [5-6]. Students take the initiative and can fully control their own learning. Let students change from the original receiver of information to the processor and creator of information. Digital learning makes classroom interaction more timely and effective.

In the context of digital learning, students can not only widely absorb the resources of the surrounding environment, but also have good interaction. There is much social software that can interact in time, which can support the communication between teachers and students anywhere and at any time. Students also have more opportunities to show and communicate. Teachers can clearly understand the differences between each student before and after learning and adjust the teaching plan. For students with weak acceptance skill, micro videos can be used to help them watch and study repeatedly [7].

2.3 Practical significance of innovative talent training

Innovation is an inexhaustible driving force to promote social development. In recent years, countries all over the world have promoted the innovation drive to the national level. In terms of social development, the cultivation of applied innovative talents is the source power to promote regional economic development and the adjustment and upgrading of industrial structure. No matter from the national strategic development or social development, it is inseparable from applied innovative talents. At present, due to the immature development of China's Applied Undergraduate Colleges and universities and the lack of innovation in the talent cultivation mode, the cultivation mode of innovative talents should be reconstructed, It helps to improve the training quality of innovative talents in the digital background and promote the development of social economy [8-9].

The establishment of TT mode is the basis for improving TT quality. The introduction of advanced education concept is the soul of TT mode. Stem education concept advocates the goal of cultivating innovative talents with all-round development of morality, intelligence, physique and beauty, which is the starting point and foothold of education reform and innovation [10-11].

Cultivation of innovative talents in China should pay full attention to the actual needs of the training objects, change the traditional unified and solidified education mode, pay more attention to teaching students according to their aptitude, and carry out specialized training according to the different characteristics of innovative talents. And use digital technology to build an experiential practical teaching platform, so that talents can grow in scientific research practice. At the same time, give full play to the key role of teachers in the whole training process, change teachers' backward teaching methods, boldly apply new educational models, give full play to the guiding function, encourage the training objects to think and innovate independently, and build an unrestricted free academic atmosphere. Further introduce talents of scientific research enterprises with practical skill to participate in the communication and teaching system [12].

3. Construction and practice of innovative TT mode

(1) Pay attention to students' practice and experiential education

Through the research, it can be seen that most of the foreign industry university research cooperation modes provide an event platform for TT and scientific research transformation of colleges and enterprises. In essence, they are experiential education. Through the real situational mode and lasting for a certain time, they provide innovative training and practical experience for their participants, so as to improve their professional quality.

(2) Pay attention to cultivating students' innovative skill and spirit

TT in the digital background mainly focuses on the skill of participants to raise, analyze and solve problems. Only on the premise of improving these abilities can the innovation skill achieve a qualitative leap, so as to improve the TT objectives, and then promote the social and economic development. TT under the digital background pays more attention to the training of innovation skill and practical skill, carries out theoretical teaching through the network, and then applies the theory to real life, so as to provide a good environment and atmosphere for social scientific and technological innovation.

(3) Based on digital technology, personalized training of talents

Firstly, we should create a TT mode with the help of digital technology mode, which should not only emphasize the value of training, but also consider the richness of content; We should not only accord with the age characteristics of students, but also pay attention to the differences between individuals; We should not only respect students' interests, but also pay attention to the integrity of content structure; Build a learning platform specifically for the training of different talents. In a

word, the current digital training platform is not perfect and needs to be further improved under the support of national special learning policies.

(4) Pay attention to the training process of innovative talents

Design a scientific and reasonable training mode. Excellent training paradigm affects the emotion, knowledge, skill and quality of each talent, which is an important basic condition of this training process. In this regard, in the design of TT mode under the digital background, we need to take the social and market demand as the basic criteria, develop a TT scheme that can improve students' learning skill, innovation skill and entrepreneurial skill, emphasize the intersection of disciplines, pay attention to knowledge transfer, pay attention to practical training, and cultivate compound innovative talents. Focus on "student-centered" and give students full freedom of learning. Through long-term research, people find that compared with the cultivation of innovation skill, knowledge and quality, the most important thing is to try to eliminate the obstacles of talent innovation.

(5) Attach importance to strengthening the supporting and guiding role of the government

Promote the development of innovative TT mode, standardize relevant policies, regulations and strategic planning, establish intermediary service institutions, and promote international TT cooperation. Meanwhile, the government can formulate policies and regulations to promote the development of TT mode and improve the enthusiasm of TT.

3.1 Research methods

This paper adopts the questionnaire survey method, through the questionnaire survey on the training mode of innovative talents under the digital background.

3.2 Data processing and analysis

In this paper, SPSS 22.0 software is used to count and analyze the questionnaire results, and k-test is carried out. The k-test formula used in this paper is as follows:

$$k = \frac{\bar{r} - \gamma}{\frac{\sigma_X}{\sqrt{n}}} \quad (1)$$

$$k = \frac{\bar{R}_1 - \bar{R}_2}{\sqrt{\frac{(n_1 - 1)Q_1^2 + (n_2 - 1)Q_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \quad (2)$$

Where formula (1) is a single population test, which is the average number of samples, q is the standard deviation of samples, and N is the number of samples. Formula (2) is a double population test, Q12 and 22 are two sample variances, and the sum is the sample size.

4. Investigation, research and Analysis on the cultivation of innovative talents under the digital background

4.1 Through the questionnaire survey, the conclusion of digital product penetration is shown in Table 1 and figure 1

Table 1: Usage of digital products

	Mobile phone	Computer	IPad	Other
numerical value	298	290	146	47
Proportion	100%	97%	52%	18%

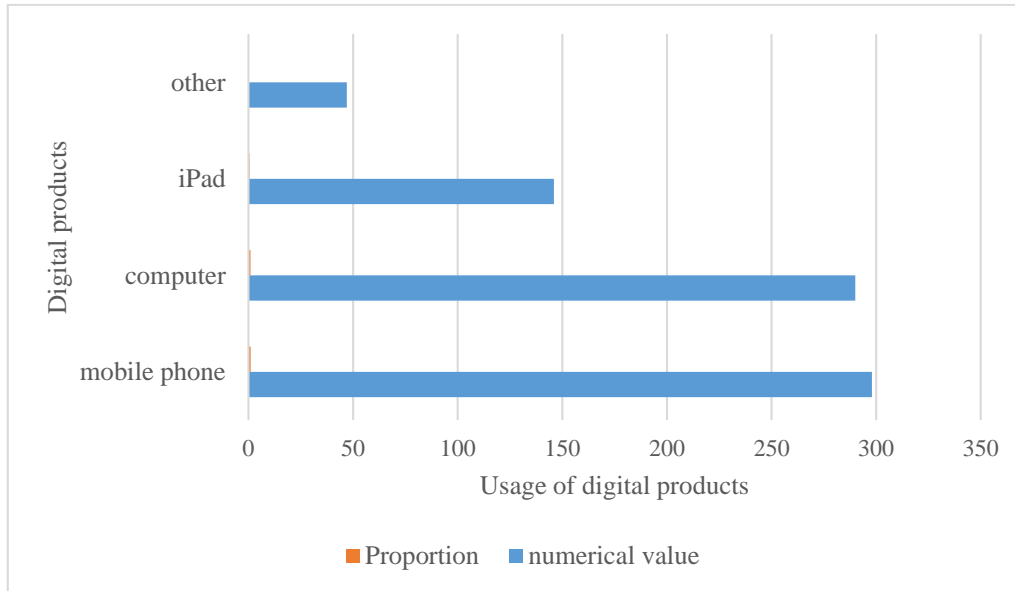


Figure1: Usage of digital products

Through this questionnaire survey, we can find that the penetration rate of mobile phones has reached 100%, and the number of families with computers is 290, accounting for 97%; The proportion of households using iPad has also reached 52%. It can be seen that the current digital products have been basically popularized in China, which also shows the progress of the times. Digital products have entered thousands of households, which also show that everyone has access to mobile phones, computers and other digital products, which provides a practical basis for the cultivation of innovative talents.

4.2 Next, through the survey of students' satisfaction with digital teaching, the survey results are shown in Figure 2

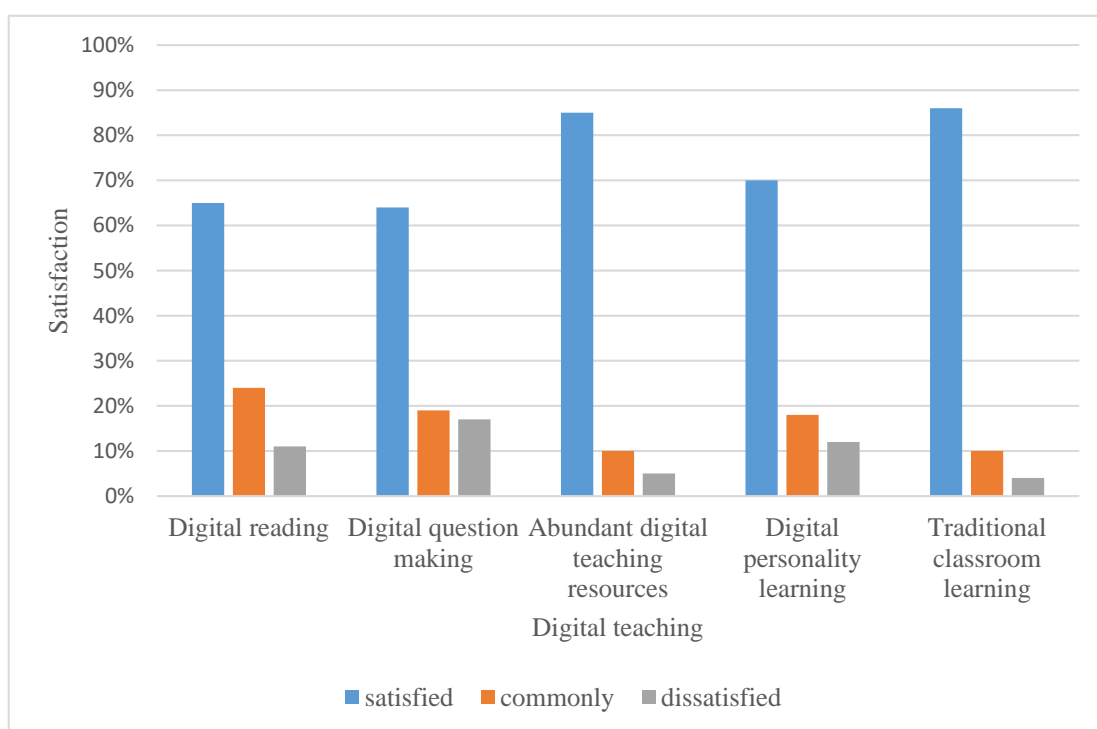


Figure2.Students' satisfaction with digital teaching

The survey results show that the satisfaction of digital reading is 65%, the satisfaction of digital problem-solving is 64%, the rich digital teaching resources are as high as 85%, and the digital personality learning is 70%. Most people are satisfied with digital learning, which is conducive to the construction and practice of innovative TT mode under the digital background.

5. Conclusions

With the development of information technology and the emergence of digital learning, it provides a new idea and method for the cultivation of innovative talents. Generally speaking, the traditional teaching methods can no longer fully meet the needs of TT and social requirements. With the rapid development of information and communication technology, and the training process of innovative talents around the world is becoming increasingly bright, Countries around the world have embarked on the necessary road of educational informatization to promote the sustainable development and reform of talent training. In the process of educational informatization, the popularity of personal mobile terminals and the emergence of cloud computing make it possible for students to study personalized and anytime, anywhere, and promote TT into the stage of mobile learning, while digital learning is in the advanced stage of mobile learning.

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