

# ИССЛЕДОВАНИЕ ИЗМЕНЕНИЙ В ПРАКТИКЕ ВЫСШЕГО ОБРАЗОВАНИЯ В ЭПОХУ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА

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**Аннотация.** В настоящее время искусственный интеллект и большие данные тесно интегрированы, что подталкивает высшее образование к направлению интеллекта и «персонализации» с различных точек зрения, таких как образовательные ресурсы, педагогика, коммуникация и взаимодействие. Поэтому колледжи и университеты должны столкнуться с новыми изменениями в подготовке талантов в эпоху искусственного интеллекта, активно адаптироваться к интеллектуальной образовательной среде, изменить механизм подготовки талантов и идти в ногу со временем. В данной статье исследуются новые изменения в высшем образовании в эпоху искусственного интеллекта и предлагаются некоторые конкретные механизмы их преодоления.

**Ключевые слова:** искусственный интеллект; высшее образование; практика изменений.

## A STUDY OF CHANGING PRACTICES IN HIGHER EDUCATION IN THE AGE OF ARTIFICIAL INTELLIGENCE

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**Abstract.** At present, artificial intelligence and big data have been closely integrated, pushing higher education to the direction of "intelligence" and "personalisation" from different perspectives, such as educational resources, pedagogy and communication and interaction. Therefore, colleges and universities should face the new talent training changes in the era of artificial intelligence, actively adapt to the intelligent education environment, change the talent

training mechanism, and lead the development of the times. This paper studies the new changes in higher education in the era of artificial intelligence, and puts forward some specific coping mechanisms.

**Keywords:** artificial intelligence; higher education; change practice.

With the development and improvement of big data, algorithms and computing power, artificial intelligence technology has brought about significant changes in various fields of society. Higher education needs to meet the new requirements of talent cultivation in the age of artificial intelligence and make corresponding changes. In the face of the convenience and speed of knowledge acquisition, it is necessary to put learning above education; for robots to replace human work, it is necessary to cultivate human creativity; in the face of "Artificial Intelligence +", it is necessary to increase the construction of new majors and the transformation and upgrading of traditional majors.

## 1. Artificial intelligence triggers changes in higher education

### 1.1 Teachers' teaching methods

With the development of artificial intelligence, the role of educators has changed to the mode of "artificial intelligence + teacher". Traditional higher education is lecturer-centred, using standard textbooks and uniform teaching methods, which is not conducive to the individual development of students. Relying on mobile Internet big data, cloud computing and other technological innovations, AI has created many open intelligent education platforms and intelligent learning software. These software platforms have the functions of lecturing, teaching, teacher-student interaction, assessment and analysis, and after-school counselling, thus reducing the teaching burden of teachers and allowing teachers to leave more time and energy for pedagogical innovation, academic research, and teacher-student emotional development.

### 1.2 Student Learning Mode

The traditional university system is a class lecture system, and artificial intelligence can be based on big data to capture students' personal preferences, learning habits, current knowledge level, to design and develop targeted learning content, planning for learning time, according to the learning feedback, to facilitate students to adjust the learning programme, greatly improving the learning efficiency [1, P.22-27]. At the same time, students have more freedom to choose the space and time for learning, classroom organisation is no longer dominated by classroom teaching, discussion, Experimentation and heuristic learning have become the mainstream. In addition, the establishment of large-scale knowledge database, students do not have to spend a lot of time and energy

to find and categorise knowledge points, through the keyword search can be obtained in the shortest possible time to get the information they want to reduce the burden of learning, so that the learning process has become a systematic process of knowledge fusion and knowledge application.

### 1.3 Distribution of teaching resources

If divided by regions and types of colleges and universities, there are great differences in educational resources, and the distribution of educational resources is very uneven. With the development of artificial intelligence, traditional colleges and universities have gradually developed into intelligent education platforms including teachers and intelligent devices. It breaks the limitations of time and space, builds a three-dimensional learning field, realises the synchronous sharing of educational resources, and further promotes educational equity. The distribution of educational resources will be further increased and balanced, creating more space for students to learn independently. In addition, AI can also provide opportunities for special populations to receive higher education.

### 1.4 Aspects of talent cultivation mode

In the era of artificial intelligence, the goal of cultivating higher education talents is to cultivate "composite" talents with innovative ability, independent thinking ability, independent learning ability and sound personality, and at the same time to adjust the structure of talent cultivation, reduce the scale of employment-oriented talent cultivation, and strengthen the general education in which students can independently choose various learning contents, so that the ratio of scaled education and personalised cultivation can be improved. At the same time, adjust the talent training structure, reduce the scale of employment-oriented training, and strengthen the general education for students to choose various learning contents independently, so as to balance the ratio of large-scale education and personalised training. Accelerating the reform of the talent training model is the fundamental requirement for higher education to adapt to the development of artificial intelligence [2, P.98-102].

## 2. Initiatives for Change and Adaptation of Higher Education in the Age of Artificial Intelligence

### 2.1 Updating the concept of higher education talent cultivation

Changing the concept of higher education talent cultivation and talent cultivation goals is a key part of higher education reform in the age of artificial intelligence. Only with a correct understanding of the concept and goals of talent cultivation can we reform and innovate the practice of higher education and talent cultivation. Government, society and universities must work in concert and play an important and constructive role together. With the participation of AI, more

favourable conditions are provided for the government, society and universities to change the concepts and objectives of talent cultivation, mainly in two aspects. Firstly, the current concept of training professionals has been transformed into one that can cultivate talents with comprehensive literacy skills, such as scientific literacy and humanistic literacy. Secondly, by strengthening the trilateral cooperation among the government, society and colleges and universities, the achievement of the goal of cultivating higher education talents can be further promoted.

## 2.2 Optimising the allocation of practical resources in higher education

The important practical resources of higher education is the development of human resources, for the way of talent cultivation as well as the content, as the main body of talent cultivation, teachers must constantly strengthen and change the educational content and educational methods of higher education, and at the same time, constantly update their reserves of AI knowledge and educational literacy. For example, colleges and universities can actively cooperate with enterprises, especially leading enterprises in AI technology, and establish a talent training cooperation platform to help enterprises update the latest cutting-edge AI knowledge, promote student growth and talent cultivation, and provide cutting-edge talent support for the industry[3,P.57-60].

## 2.3 Establishing a scientific evaluation system for talent cultivation in higher education

The establishment of a scientific evaluation system for talent cultivation in higher education ensures the cultivation of high-quality talents and the whole process of testing talents, and the scientific and reasonable talent cultivation evaluation system complements and improves the reform and adjustment of higher education. In order to establish a scientific and reasonable talent cultivation evaluation system, colleges and universities combine advanced artificial intelligence technologies such as big data and cloud computing, actively cooperate with leading enterprises in the field of artificial intelligence and big data applications, and use the platform to create educational and teaching databases of colleges and universities, and set data affecting the cultivation of talents such as changes in students' learning achievements, students' tendency to choose courses and the popularity of teachers. Finally, create a graduate employment database.

## 2.4 Correctly handling the relationship between online teaching modes and traditional classrooms

The teaching mode of "Internet + Education" has brought unprecedented impact on the traditional classroom. Under traditional course teachers, the effectiveness of lectures is fed back through homework and tests, with long

intervals between them [4, P.125-135]. Online course learning can break the limitations of time and space, with flexibility, diversity and timeliness. Students can give feedback online when they encounter problems, and teachers can adjust the offline teaching plan, teaching content and course structure according to students' feedback, which makes up for the shortcomings of traditional classroom teaching and brings students a brand new learning experience that is incomparable to the traditional classroom. However, it should be emphasised that online classroom cannot replace traditional classroom teaching. In the traditional classroom, the teacher's thinking, creativity, and academic charisma play an irreplaceable role in shaping students' personalities and developing their characters. Teachers should correctly handle the relationship between online teaching mode and traditional classroom, and online and offline teaching should play to their respective strengths and complement each other's advantages.

### 3.Conclusion

In the era of artificial intelligence, the mode of higher education has been transformed into the main model of "competence as the core, knowledge-based, student-centred". The organic integration of artificial intelligence and higher education reduces the inertia and complicated tasks, and effectively promotes the transformation of teachers' teaching method, students' learning method, educational resources allocation and talent cultivation mode [5, P.553-568]. At the same time, the duties of college teachers, educational philosophy, work structure, etc. will face a huge challenge, the reform is an inevitable trend, face up to the challenge in order to have a new breakthrough. As far as higher education is concerned, it is necessary to firmly grasp the opportunities of technological innovation, respond positively to the concepts, modes and processes of higher education, and establish a scientific, advanced and personalised model of integrated talent training, so that intelligence can create a new situation for higher education in the future.

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