

Study on Design Elements of Educational Large Data Platform

Zhaofei Li¹, Hengli Wang^{2,a,*}

¹ Wuhan Xijia Great Technology Company, China

² Economics and Management School, Wuhan University, China

^a wanghengli@whu.edu.cn

*corresponding author

Keywords: Big Data, Law, Education, Exploration

Abstract: In this era of information explosion, the rapid development of information technology, the various industries have also ushered in changes. Large data is a kind of modern information technology, which can make people judge the essence of mistakes by computer calculation, help people see the law of things, and then operate them. From the perspective of education, this paper will study the design elements of large data platform, analyze how to use large data technology to realize individualized education mode, and make innovative exploration to promote the development of education.

1. The Significance of Large Numbers of Education

In today's rapid development of the Internet era background, computers have slowly entered all aspects of people's lives. And the form and storage of data are constantly changing, enabling the Internet to store more information than ever before[1]And this information has been growing explosively as people live. And with the development of Internet of things, large data has entered the stage of information explosion.

Large data technology is based on the needs of the times came into being, it is a kind of thought, can let people through scientific calculation to see the essential law of things; it is a method, can judge the objective characteristics through indirect data and find the essential law of things; it can make people understand the essence and law of things more thoroughly, although it may not be true "facts ", but can be infinitely close to facts.

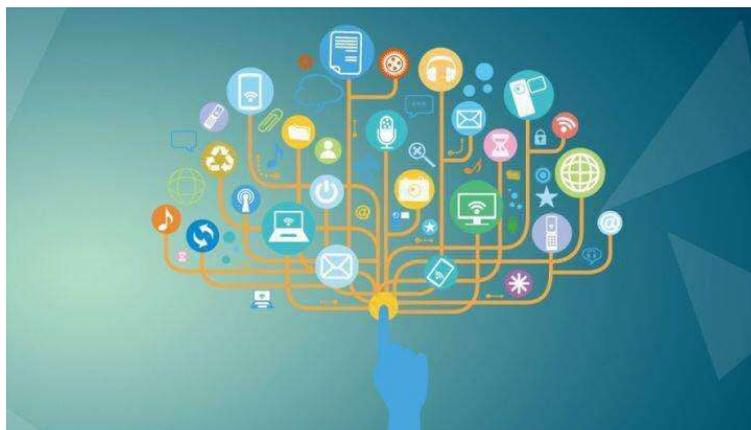


Figure 1 Large data technology

A large number of data can be stored on the Internet. Its storage space is very large, and the unit of measurement can reach the level of EB. A large number of data can be calculated in a certain time. Accuracy: mainly refers to the large data technology can be calculated after the massive data analysis and summary of infinite close to the facts of the information.

Today's society is currently in the era of the Internet changing the world, it solves the regional and time constraints of information transmission, so that people greatly save the consumption of

resources, education as a place of human cultural heritage, naturally to keep up with the pace of the times, so a large number of educational data appeared. The large data of education refers to the collection of all kinds of data produced in educational activities, which can be used to analyze the path of educational development, and also to sum up the future of teaching services.[1]It is not all information about educational activities that is included, it is a purposeful collection of information. In the traditional teaching mode, teachers usually teach according to the progress of the textbook, not the progress of the class. This is because teachers can not obtain students' learning needs, can not make teaching adjustments, can not provide personalized professional guidance, and can not understand the difficulties encountered by students in the process of learning. Because of the regional limitation and the backward value cognition, the traditional educational schools can not make rational use of teaching resources, and the teaching efficiency is very low. Traditional online education is also only put some educational advertisements and educational chicken soup on the school website, there is no interactive teaching means and the attraction of encouraging students to learn.

Education large data has diversity, more traditional education to compare, it has the following characteristics: such as the comprehensiveness of data, the immediacy of data, the persistence of data, the diversity of data, in-depth multi-level analysis, prediction and so on. Compared with the large numbers of other industries, the large numbers of education have very high complexity and creativity.

2. Analysis of Education Industry Needs

In the process of education, students usually want to know whether their learning style is appropriate, what changes will happen to their continuing academic performance, and whether their own learning planning is correct. For the teacher, the teacher in the process of education want to know the students' knowledge grasp, learning process what questions, this teaching method can not understand, that teaching method is better for students. To solve the problem of unbalanced development of education, to realize the inclusive education, and to improve the development of education by analyzing the law of teaching. 2. solve the problem of the invisibility of educational information, make the information of education fair and open, and promote the quantification of education through the large data of education. 3. solving the problem of students choosing a school, students usually listen to others' subjective evaluation of the school, and through the education of large numbers, they can evaluate all aspects of a school with objective information, so that students can understand what they want to be the school. 4. solving the problem of post-graduation employment in education, students are usually blindly looking for high-paying jobs or easy jobs after graduation, so that employment is usually rejected, and a large number of educational documents can let you see their own characteristics and advantages, so that students can be reasonable employment[3]6.To realize the individualization of educational methods, many schools are following the progress of the syllabus at present, and have no idea of the individual learning situation of the students. For students, large data education can make students understand their shortcomings and shortcomings in learning, analyze the appropriateness of learning methods, predict academic achievement, and for teachers, they need to know the students' learning situation and learning methods and living conditions, and then carry out education according to the situation.



Figure 2 Large data technology

3. Design of Education Large Data Platform

The users of the educational platform are divided into students, teachers and parents. The use of the details is that teachers and students can learn about students' learning situation and learning style through the educational large data platform, and students can learn whether their learning style is suitable for them through the educational large data platform[4]predict what will happen in the long run Nowadays, in China, parents generally attach importance to the education of schools, and the education of large numbers and the importance of the state, the only difficulty of this educational large data platform is to promote, let teachers and students accustomed to the traditional mode of education to adapt to this educational large data platform.

According to the user type and authority, the educational data platform can be divided into four levels:

Student role level: education big data platform through the use of data collection related technology to obtain students' learning data such as: learning progress, learning style, daily life, through prediction technology and data mining technology to make future assessment of students' current behavior, learning style effect evaluation, and then put forward suggestions to students, optimize learning style, find the most suitable learning path for students to achieve the desired goals.

Teacher role level: the educational big data platform provides each teacher with accurate student data through the analysis of students' situation and educational resources and educational environment, so that teachers can accurately grasp the students' learning and living conditions, and then carry on individualized management and teaching to students, and properly carry on artificial intervention to students' life, so that students can learn happily and independently, and achieve the purpose of teaching according to their aptitude.

Parent role level: educational big data platform allows parents to always understand the students' learning situation and the daily life of the school and the trend of achievement increase, let parents know more about the students, at the same time, to provide students with the resources and environment he needs to help teachers better educate students.

The role level of school administrators: the educational big data platform can provide the school administrators with the comprehensive situation of students, as well as the visual data of achievement prediction, interest analysis and so on, so as to facilitate the school managers to make decisions according to the situation of students[5]to help students in difficulty and allocate teaching resources reasonably.

The establishment of a large educational data platform can efficiently statistics the current data in education, analyze useful information for school development, solve the problem that traditional teaching can not really teach students according to their aptitude, and form a new education system. The platform can enable students to experience individualized teaching methods and training in

school and at home; it can enable teachers to understand students' daily situation and learning status and learning style; it can enable parents to understand their children's learning situation and life after work.



Figure 3 Large data technology

4. Conclusion

To sum up, this paper simply designs the framework of educational large data platform according to the present educational environment and educational needs. The educational big data platform mainly analyzes the students' personal data through the students' knowledge, behavior, life, learning style, learning attitude and other student data, such as knowledge mastery, achievement prediction, learning style, psychological state, interest and hobby, etc. Then teachers and parents judge whether students have learning crisis or psychological crisis according to student information, if there is an artificial intervention, so that students can achieve a healthy psychological state of autonomous learning, improve the effectiveness of learning. Teachers can also carry out individualized education and teach students according to their aptitude according to the knowledge mastery displayed on the student information. This educational data platform has some difficulties, such as how to correctly collect the students' comprehensive knowledge, behavior, life and other information. Students' learning attitude is easily changed by external interference, so it is necessary to update and obtain the latest and most complete data at all times. There are still some shortcomings in the educational big data platform, such as whether students can listen to the advice of the educational big data platform and implement it? no follow-up test data for analysis. The dissemination of a large educational platform is also a question of whether teachers and students who have received many years of traditional education can accept this new educational system.

References

- [1] Liu, Jiexu. Exploration on Innovation of Higher Vocational Education Mode Based on Large Data Platform and Data Mining Mode. *Shanxi Youth*, no. 7, pp. 195, 2020.
- [2] Chen, Xiaoshi. A Feasibility Study of Large Data Technology Platform in the Field of Distance Education. *Journal of Jilin Radio and Television University*, no. 11, pp. 77-78,86, 2019.
- [3] Baiyun, Chu Qingdong, Ni Fangyan. A Study on the Key Problems in the Construction of Large Data Platform for Higher Education Quality Monitoring and Evaluation. *Education and Teaching Forum*, no. 2, pp. 118-119, 2020.
- [4] Dong, Xingzhi. A Probe into the Teaching of Chinese Personalized Reading Based on the "Big Data" Education Platform. *Secondary School Teaching Reference*, no. 36, pp. 10-11, 2019.
- [5] Zhen, Xiaofi. Analysis on Influencing Factors of Information Sharing on Educational Large Data Platform. *Modern Intelligence*, vol. 39, no. 7, pp. 122-127, 2019.