Pisco Med Publishing

Research on the cultivation of special education professionals in the era of big data

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Abstract: In the era of big data, the education sector is increasingly benefiting from the development of data science and technology. In the field of special education, the application of big data technology provides unprecedented opportunities and challenges for personalized and precise education. The cultivation of special education professionals also needs to keep up with the times, focusing on the cultivation of skills such as data analysis and data mining, in order to better meet the special needs of different learning groups. This study aims to explore the training strategies and methods for special education professionals in the era of big data, in order to promote the development of special education and achieve more intelligent and personalized educational services.

Keywords: big data; Special education; personnel training

Full media has grown into the fastest mobile network media, encompassing all types of media currently available, including traditional media such as newspapers, books, magazines, as well as new types of online media, including wall advertising, building advertising, etc. This full coverage trend is not available in any single media form before. The emergence of full media has brought new opportunities and challenges to the special education industry in universities.

1. Opportunities for cultivating special professional talents in the era of big data

（1） Breaking the limitations of "small samples"

Due to the relatively short development time of special education in China and the lack of theoretical research and practical experience in professional talent cultivation, coupled with the scarcity of special education professionals, there is a limited amount of experience that can be drawn from the cultivation of special education professionals in China. However, at the same time, with the continuous development of Chinese society, the demand and demands of special education for special needs children and their families have shown a continuous growth trend, and there is a huge gap between the cultivation of special professional talents and the development of special education. Due to the particularity of special education, there are significant differences among individuals with special needs, which leads to the reliance on small samples or individual cases in special education research. This can affect the objectivity of special education theory research and limit its development. The arrival of the big data era can effectively break the limitations of “small samples” in the research of special education theory. Big data can provide large-scale data samples for special education theory research, breaking the limitations of “small samples” in the learning process of special education majors, and providing a theoretical framework and practical evidence closer to the actual needs of special education professionals.

（2） Breaking through the limitations of time and space

Professional learning is an important way for special education professionals to achieve professional development. However, due to the particularity of special education majors, the specialized learning of special education students is limited to narrow areas. Compared with general education majors, special education majors have relatively limited learning resources and opportunities, greatly limiting their time for professional learning. In the era of big data, this problem can be effectively solved. The application of data collection and mining technology can enable every special education major student to obtain a massive amount of professional learning resources as a professional theory builder, providing greater convenience for their professional learning.

2. Training of Special Education Talents in the Era of Big Data

（1） Building a training model of "big data+personalization"

Due to the late start of the special education major in China and the lack of theoretical research foundation and practical experience, most universities adopt an education and training model centered on professional teachers, with “indoctrination” and “preaching” as the main classroom teaching methods, which seriously affects students’ classroom participation and experience. In the era of big data, this education and training model is obviously not applicable, which requires special education teachers in universities to build a “big data+personalized” special education professional talent training model based on the actual needs of special education and leveraging the advantages of big data. First of all, special education teachers can provide students with rich learning resources by virtue of the big data analysis function in the Internet platform. Through the big data analysis mechanism, accurately analyze the professional development needs of students, help them find suitable learning entry points and methods, and formulate scientific learning plans and plans; Secondly, special education teachers can utilize the “blended online and offline teaching model” to integrate various educational resources from schools, experts, and society. Based on big data analysis technology, they can comprehensively grasp the learning situation of students, accurately push learning resources for them, and provide personalized guidance to enhance the pertinence and effectiveness of talent cultivation.

（2） Creating a community for the professional development of special education professionals

In the era of big data, the speed of knowledge updating and iteration is constantly accelerating, and the emergence of various new concepts, knowledge, and methods has promoted the learning ability of special education professionals to be improved. However, in the face of massive data, individual learning ability is very limited. Therefore, special education professional learning must establish a collective consciousness, actively seek collaborative cooperation, build a professional development community, and accelerate the absorption of new concepts, new knowledge, and new methods. Firstly, special education students should establish a learning philosophy that keeps up with the times, leverage the advantages of the big data era, integrate high-quality learning resources, continuously absorb new knowledge, update their professional knowledge system and educational philosophy, and promote the improvement of their professional knowledge and skills; Secondly, colleges and universities should build a special education professional development community based on the Internet platform according to the training needs of special education professionals to facilitate learning and communication between students. At the same time, universities can also fully leverage the role of excellent cases and expert advanced concepts to provide high-quality data resources for extensive learning and research for professional development, and promote the professional development of students.

（3） Building an Education Resource Service Platform

Due to the uneven level of economic development in different regions, there is a problem of uneven distribution of resources between regions and schools in China’s special education. In order to truly improve the training level of special education professionals in China, it is necessary to solve this problem, so that every special education major student can enjoy equal educational resources. Therefore, universities should establish consensus among themselves, utilize big data technology, build a special education resource sharing platform, and achieve optimized allocation of educational resources. At the same time, universities should also cooperate together to develop higher quality special education resources, achieve complementary advantages between regions and schools, allow high-quality educational resources to flow, create a good educational ecosystem for the learning of special education majors, and improve the overall level of talent cultivation in special education majors.

（4） Policy guarantee

Compared to traditional small-scale data, the biggest advantage of big data is that the data volume is large enough, and even the overall parameters can be directly obtained. However, in order to fully demonstrate the value of big data, it is necessary to do a good job in data collection and sharing. At present, the number of special education professionals in China is relatively small, but due to the particularity of special education, it provides the possibility for the accumulation of personalized data. Therefore, in the era of big data, government departments

should strengthen their attention to the cultivation of special education professionals, formulate special policies, build special education big data platforms, break down data barriers in the field of special education, and achieve data sharing between schools and regions. Only in this way can a huge data model be formed, and the value of data be fully reflected, providing scientific, accurate, and timely data support for the cultivation of special education professionals. At the same time, in the construction process of the big data platform, it is also necessary to ensure the credibility of the data, especially the information resources related to special children, in order to truly break the situation of individual case education in special education and improve the utilization value of data information. In addition, in order to ensure the legitimate use of various data resources in big data platforms and reduce unnecessary resource waste, relevant departments in China should also formulate corresponding laws and regulations to enable users to use data in accordance with the law.

The era of big data can cultivate more high-quality special education talents, better serve, guide and educate special children, and improve the effectiveness of special education. Therefore, special education teachers in universities must view talent cultivation work with a correct perspective, continuously analyze problems and shortcomings, and actively improve and revise professional talent cultivation plans. We should make good use of the full media as a carrier, strengthen teacher construction, innovate educational concepts, optimize curriculum structure, and innovate teaching models. This can effectively make up for the shortcomings of traditional education, enhance the effectiveness of special education professional curriculum teaching, continuously expand the special education talent team, and contribute to the development of special education.

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