Research of Application of Artificial Intelligence in Preschool Education

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Abstract: At present, preschool education has been included in China’s compulsory education and has become an important part of China’s basic education. With the continuous development of information technology, kindergartens in some coastal areas have begun to apply artificial intelligence technology to the daily teaching. The use of artificial intelligence technology for teaching can not only improve children’s enthusiasm for learning but also help the reform of preschool education institutions. In view of this, the article mainly analyzes the application of artificial intelligence technology in preschool education, and proposes corresponding solutions to the problems in artificial intelligence education and teaching.

1. Introduction:
Information technology has not only changed the lives of the public but also changed the teaching methods. At present, some preschool educational institutions have begun to use artificial intelligence teaching technology. It is not only a good auxiliary tool for children’s teaching but also helps to cultivate children’s information literacy and logical thinking, and promotes the reform of preschool education institutions in China with a very important meaning.

2. The significance of artificial intelligence technology in preschool education
With the continuous popularization of artificial intelligence technology, its application to semester education has extraordinary significance in promoting the development of students. First of all, young children are immature flowers and the future of the motherland. The artificial intelligence education of young children can not only help them master a lot of advanced knowledge, but also greatly improve their imagination and creativity. Secondly, the education and training of artificial intelligence technology for young children is conducive to deepening their understanding of artificial intelligence technology, which can create favorable conditions for children’s later learning. Finally, the development of artificial intelligence technology teaching in the preschool education stage is in line with current teaching trends.

3. An Analysis of the problems of artificial intelligence in preschool education

3.1 Teachers in preschool institutions ignore the importance of artificial intelligence education
At present, artificial intelligence technology is very widely used, not only in electronic payment, communication and travel but also in education. However, due to the relatively short period of birth of artificial intelligence technology, many teachers still regard it as a very mysterious high-end technology. It is precisely because of the deviation of teachers’ concepts that it is difficult to popularize artificial intelligence education technology. The essence of true artificial intelligence education technology is no different from that of Internet multimedia. They all use corresponding
Internet clients and platforms to assist teachers in completing various teaching tasks. But unlike multimedia teaching, it can process teaching information, thereby indirectly improving the quality of classroom teaching. Since most of the teachers in preschool education institutions have not accessed artificial intelligence professional technical training, naturally they will be dubious about artificial intelligence technology. Under the influence of teachers’ psychology, children will also misunderstand it.

Artificial intelligence teaching materials and teaching means are deficient. According to a large number of teaching cases, although some preschool education institutions have begun to apply artificial intelligence teaching technology, there are very few preschool education institutions that can apply it. Most of them are concentrated in some first-tier cities and coastal cities in China. In addition, although preschool educational institutions in coastal areas have applied artificial intelligence technology for teaching, many educational institutions do not use artificial intelligence teaching materials. Artificial intelligence education can only stay in theoretical teaching, and it is difficult to achieve substantial teaching effects. In addition, because many preschool teachers have never accessed artificial intelligence teaching technology in previous, they lack teaching experience with some teaching cases, which makes it difficult to complete the arrangements. Teaching tasks are also difficult to improve the quality.

4. An effective strategy to promote the application of artificial intelligence technology in preschool education

4.1 Artificial intelligence teaching technology is used to create good atmosphere for children

A good teaching atmosphere is the basis and premise for improving the quality in preschool. In view of this, teachers must first create a good teaching atmosphere to improve children’s learning interest, and teaching quality and effect. In the traditional preschool classroom, teachers often use some small games and interactions to activate the atmosphere to attract children’s attention. Although games can also activate the atmosphere to a certain extent and stimulate children’s interest, but its mode of activation is limited. If teachers use a similar model to activate the atmosphere for a long time, the interest will be reduced over time. Therefore, teachers can skillfully use artificial intelligence technology to create a good atmosphere for children.

For example, teachers can use artificial intelligence technology to effectively activate the classroom in teaching children’s musical knowledge. As shown in figure 1 below. Artificial intelligence voice robots are introduced in some preschool education institutions. The artificial intelligence voice robots can play fairy tales, music, children’s songs, etc. according to teachers’ voice instructions. In order to effectively enhance the atmosphere, teachers can allow children to interact with robots to help them learn all kinds of music knowledge. For example, in the process of teaching children drawing, teachers can guide children to use tablet computers and interact with artificial intelligence robots in the computer system. Children will follow the robot’s guidance to use pens or fingers to draw their favorite images on the tablet. Through this teaching mode, not only children’s interests can be enhanced but also the application of artificial intelligence technology can be strengthened. To better improve the teaching effect of preschool education classrooms, kindergarten teachers should also strengthen the learning. Only when the teacher has a full and comprehensive understanding of artificial intelligence teaching technology can it be better applied to daily life. It can give full play to its advantages and improve teaching quality and effect.
4.2 Set up teaching platform to realize technology progress and promotion

Combining with the above, artificial intelligence technology has a wide range of applications. Introducing it into the current preschool education can not only help preschool teachers work better but also help to improve the logical thinking of children. In addition to applying artificial intelligence technology to daily classroom teaching, it is also possible to promote it by creating a teaching platform as a carrier, thereby realizing the development and progress of artificial intelligence teaching technology. According to the foregoing, there are only a few preschool teaching institutions in China that use artificial intelligence teaching technology information, and it has not been widely popularized. In order to further improve the quality and teaching effect of, related the education departments should take necessary measures to popularize and promote. For example, the education department can invite professional technical R&D teams to build an teaching platform suitable for widespread promotion. The platform can not only effectively connect preschool education, elementary schools, middle schools and other teaching institutions but also achieve seamless connection with teaching textbooks.

For example, due to the different picture books used by preschool educational institutions in different regions, kindergarten teachers can search for picture books that meet the teaching requirements through account login and attribution query, and use the platform to carry out intelligent picture books teaching for children. For example, teachers only need to create their own login account for the children, and guide them to log in to the platform in the story ‘Little Rabbit in a Hat’. In addition to the sketchbook story after artificial intelligence technology, not only can human voice interaction be realized but also many game links have been added. If the child only needs to gently click on the text on the picture book, the artificial intelligence voice robot can automatically read. At the same time, the artificial intelligence technology has also dynamically processed the pictures in books and optimized to svg. As long as the child taps the picture gently, the picture will show a dynamic form. Many interactive mini-games have been added in the reading the picture book for children. For example, children can paint the illustrations on the picture book, and play the game of continuous reading and elimination according to the story. With such an artificial intelligence teaching platform, it can better improve the quality and efficiency of classroom teaching and can cultivate children’s independent learning ability.

4.3 Improve the professional level of the teachers and create a high-quality preschool education team

Early childhood teachers play a very important role in this part. To expand the application of artificial intelligence education technology in preschool education must start with teacher links by improving the professional level of teachers’ team. Although artificial intelligence technology can target children, teachers facing children directly. In the actual preschool education process, both the education department and institutions must take various measures to effectively improve teachers’ mastery of artificial intelligence technology. Only when teachers have a full understanding can they apply it
flexibly to better teach children.

For example, to effectively improve the preschool teacher’s mastery of artificial intelligence technology, the education department can adjust the assessment method. In the traditional assessment, only the teacher’s comprehensive ability and professional literacy are examined. The education department should also list the knowledge of artificial intelligence technology as an assessment item. Relevant preschool education institutions should also train teachers computer and artificial intelligence technology during the training. In addition, some qualified preschool educational institutions can also guide teachers to communicate by holding teachers’ teaching seminars and exchanges to share and learn from each other’s teaching experience, thereby greatly improving their personal comprehensive level. Teachers in preschool education institutions can often invite some experts. Teachers will learn more advanced artificial intelligence teaching knowledge under the guidance of experts to continuously improve teaching quality.

5. Conclusion
To sum up, artificial intelligence teaching technology is of great significance to improve the quality of basic education. Artificial intelligence education technology is not only widely used in life and preschool education. In order to further improve the quality and effect of preschool education, early childhood teachers can use artificial intelligence teaching technology to effectively activate the classroom atmosphere, thereby stimulating the learning fun of children. An artificial intelligence teaching platform can also be created to conduct lectures. In addition, the kindergarten teachers themselves should also strengthen the learning of computer information technology, and constantly improve their comprehensive quality and teaching.

References:
[1] Song Dan, Li Maolin, Hu Zhen, et al. 2019. Probe into the application of artificial intelligence in preschool education [J]. Today Keyuan, (10).
[2] Dong Di. 2019. Integration of artificial intelligence and education in the application of intelligent robots in preschool education [J]. Education Teaching Forum, (31): 1-2.
[3] Li Jing, Sun Yuyu. 2019. On the crisis of children in the era of artificial intelligence and the persistence of preschool education [J]. Education Today: Preschool Education Journal, (4): 4-7.
[4] Wang Qingshan. 2019. Application and development of artificial intelligence in robot field [J]. Regional Governance, 000 (003): 180.
[5] Wang Zihan. 2018. Analysis of the application of artificial intelligence in the field of education [J]. China New Communication, 020 (022): 179.
[6] Xu Lixing. 2019. On the application of artificial intelligence in teaching design [J]. China Educational Technology And Equipment, (6): 27-28.