Research on Teachers' Professional Ethical Issues and Countermeasures in the Context of Artificial Intelligence

Haiwen Xie

Guangxi Normal University, Yanshan Campus, No. 1, Yanzhong Road, Yanshan Town, Yanshan District, Guilin City, Guangxi Zhuang Autonomous Region, China

1024675956@qq.com

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Abstract: In the era of artificial intelligence (AI) + education, the rapid development of AI technology in the field of education has also brought new challenges to teachers' professional ethics. The purpose of this paper is to explore the ethical dilemmas of teachers in the context of artificial intelligence, such as privacy protection, fairness of student evaluation, and human warmth. It also proposes measures to solve these dilemmas in terms of strengthening the training of teacal education, reinforcing the supervision and evaluation mechanism, and promoting the human-computer cooperative education model, so as to ensure teachers' professional ethical norms in the context of artificial intelligence.

1. Introduction

In the era of artificial intelligence + education, education is developing in the direction of informatization, digitization, intelligence and personalization. The deep integration of artificial intelligence and education will trigger changes in teachers' professional ethics, including a series of contents such as teaching and learning, education management, teachers' roles, and teaching models.Teachers' professional ethics have been the focus of attention in our country.In the face of the integration of artificial intelligence technology, teacher professional ethics is faced with a series of ethical situations in response to social life, such as the educational relationship from "everyone" to "human-machine collaboration" and the expansion of the teaching space, which means that the traditional ethical norms of teacher professional ethics are either adapted to the times, or It means that the traditional ethical norms of the teaching profession either adapt to the times or are repulsive to the times. Therefore, the construction of teachers' professional ethics in the context of artificial intelligence in this study means that it is of great practical significance to reflect deeply on the realistic dilemmas and conflicts faced by teachers' professional ethics in the context of artificial intelligence and put forward reasonable and forward-looking countermeasures to solve the problem, based on in-depth consideration of the realistic situation of teachers' professional ethics in the context of artificial intelligence and the shortcomings of the existing teachers' ethical norms.

2. The Concept of Teacher Professional Ethics

In China, the concept of professional ethics of teachers has been used for a long time, until the Teachers' Law of 1993 stipulated for the first time from the height of the law that "Teachers are professionals who perform the duties of education and teaching", thus establishing the professional status of teachers[1]. Since then, the issue of teacher professionalization has received more and more attention, and the trend of exploring the issue of teachers from "occupation" to "profession" has occurred accordingly from the discourse system[2]. In recent years, the term "teacher professional ethics" has been used a lot. A search of the literature shows that there is a clear tendency to recognize the term "professional ethics of teachers" in the academic world. This paper compares the concepts of "ethics" and "morality" in the context of Chinese and Western cultures, and concludes that "ethics" is more objective and rational, and is more suitable for use in the context of groups and professions. The conclusion is that "ethics" is more objective and rational, more suitable for use in

group and professional contexts, and more focused on rational norms; ethics is a more subjective and humanistic ethics, which is more suitable for use in non-professional contexts, and is more focused on the ethics of the individual[3]. The so-called teacher professional ethics, according to our scholars Xu Yanfu, is the basic behavioral norms and ethical codes that teachers should abide by when engaging in their professional work[4]; scholars Liu Jie believe that teacher professional ethics can help education professionals to realize the self-regulation of the ethical norms that have been recognized, which are aimed at better fulfilling their professional responsibilities, serving the society and maintaining the reputation of the profession[5]. In general, most scholars in China agree that teacher professional ethics is the ethical code of conduct and norms that teachers need to abide by in the course of their professional activities in education. It includes professionalism consisting of professional values, professionalism, responsibility and dedication[6], as well as professional norms for teachers' relationships with schools, educated people, other groups of teachers, parents and the public. Combined with scholars' discussion of the concept of teacher professional ethics, the author believes that teacher professional ethics is the ethical code that teachers should follow when they are involved in the process of education and teaching with schools, colleagues, students, parents and other relevant subjects, so as to protect the rights and interests of teachers and to promote the overall development of the teacher professional team. Under the macro background of teacher professionalization, there is a greater need for matching professional ethics, and the transition from traditional teacher ethics to teacher professional ethics is imperative. Teacher professional ethics lies in highlighting the professionalism of teachers, the irreplaceability of the subject, as well as the positive significance of differentiating from the traditional teacher ethics, which has an important impact on the behavior of primary and secondary school teachers and the quality of teaching.

3. Teacher Professional Ethics in the Context of Artificial Intelligence

3.1. Protection of Students' Privacy Issues

With the assistance of artificial intelligence, teachers can manage students more conveniently with the support of new technologies, such as obtaining a large amount of data support from the artificial intelligence system, such as students' personal information, learning data, academic performance, etc. Through the analysis of these huge data processing, teachers can obtain more accurate and comprehensive information about students. However, the use of AI systems involves the collection and processing of large amounts of data, which may contain personal information of both teachers and students, and may raise issues of student privacy. Therefore, teachers need to ensure the confidentiality and security of such data, and the collection, storage, processing and utilization of student data need to be fully controlled to prevent data leakage. In addition, teachers need to pay attention to data protection and privacy issues, ensure data security and compliance, understand relevant laws and regulations, and take appropriate measures to protect students' privacy.

3.2. Fairness and Impartiality Issues of Assessment Tools

Artificial intelligence systems rely on a large amount of data for training, and AI technology can provide more efficient and accurate assessment tools that may have bias issues. For example, if the training data are mainly from a specific group of students, the assessment tool may be biased against other groups of students, leading to fairness issues. In addition, AI assessment tools typically measure student performance based on predetermined criteria. However, these criteria may be subjective or may define the learning objectives too narrowly, leading to fairness issues in the assessment results, and there is also the fact that AI systems tend to work on mechanisms that are often black boxes, and the lack of transparency in the assessment process makes it difficult for students to understand how the assessment results are arrived at. This may lead to issues such as students having doubts about the fairness of the assessment tool.

3.3. Teacher-Student Relationship Issues

With the advancement of AI technology, the role of teachers may shift. Traditionally, teachers are the transmitters of knowledge and the instructors of students, but in the context of AI, some of the teaching tasks may be accomplished by AI systems, and the role of teachers may shift to focus more on guiding and supervising the learning process, as well as humanized care and support. However, AI systems cannot completely replace the teacher's role in communication and interpersonal interaction. Teachers need to pay attention to maintaining emotional connections and interpersonal relationships with their students, and through careful care and guidance, they can help their students obtain an integrated and comprehensive education in the context of AI. In addition, teachers need to be technologically literate so that they can skillfully use AI systems as teaching tools. However, not all teachers possess these technical skills, which may lead to difficulties for some teachers in applying AI technologies.

4. Research on Countermeasures to Develop Teachers' Professional Norms

4.1. Strengthening Teacher Ethics Education and Training, and Improving Teachers' Ethical Concepts and Coping Skills

Teachers' and students' knowledge and understanding of educational ethics are strengthened through teacher-related training and educational activities. Teachers prioritize the development and needs of their students by understanding the limitations and ethical issues of AI technologies in teaching and learning, and by developing a correct sense of educational ethics. On the one hand, training on the ethical norms of AI is provided to teachers through the organization of special training courses, seminars or online learning platforms. The training can include knowledge and skills on privacy protection, fairness, and the use of educational data to help teachers utilize AI tools correctly and rationally. On the other hand, schools and educational institutions can provide teachers with digital literacy training and professional development opportunities, including training in the application of online educational technologies, instructional design and assessment, to help teachers update their knowledge and skills. For example, schools and educational institutions can organize digital literacy training and professional development activities to help educators understand the latest trends in digital education and teaching methods, and master the skills of using relevant digital tools and technologies; schools can also provide rich digital learning resources and platforms to enable teachers to access and use relevant information on their own, and at the same time, strengthen the guidance and supervision of teachers to help them effectively use digital tools and technologies for learning.

4.2. Strengthening Regulatory and Assessment Mechanisms to Ensure that the Use of AI is Ethical

First,Relevant government departments can formulate and improve regulations and policies related to the application of AI in education, and clarify the principles of use, ethical norms and privacy protection requirements for AI in education. This will help regulate and guide the application of AI technology in education and protect the rights and interests of teachers and students. Second, government establish a specialized regulatory body or strengthen the functions of existing education authorities to supervise and manage the development, use and evaluation of AI teaching tools. So the regulatory body can formulate relevant standards and guidelines, and monitor, evaluate and supervise the use of AI by educational institutions and teachers. Third, educational institutions conduct ethical assessment of AI teaching tools. Because an ethical assessment should be conducted before promoting and using AI teaching tools,and the assessment includes a review of the design of the teaching tools and the rationale behind the algorithms to ensure that they comply with ethical norms, do not infringe on students' privacy, and are able to facilitate students' learning and development. Last, educational institutions establish a convenient reporting and complaint mechanism to enable teachers, students and relevant stakeholders to report and reveal the existence of irregularities or ethical issues in the use of AI teaching tools.

4.3. Promoting the Education Model of Human-Computer Integration to Enhance the Efficiency and Effectiveness of Teacher Education and Teaching

In terms of personalized teaching. AI can provide personalized learning content and tutoring based on students' learning situation and needs. By analyzing students' learning data and behavioral patterns, the AI system can develop a unique learning plan for each student, help them fill in the gaps in their knowledge, and accurately adjust their learning progress and content, while the teacher can better understand the students' learning situation based on the feedback from the AI system and provide targeted guidance to the students. Besides, AI can also provide intelligent auxiliary teaching tools, such as voice recognition, image recognition and Q&A systems, to provide students with real-time questions and answers, learning resources and feedback. Students can interact with AI systems to get faster and more precise learning assistance, while enhancing their learning effectiveness and interest. Teachers can also use AI systems to manage and organize teaching resources more efficiently and provide better teaching support. By promoting the human-computer cooperative education model and complementing AI as a teaching tool with teachers, it helps to improve the quality of education, achieve personalized education, and promote students' independent and cooperative learning, while also providing teachers with more teaching support and professional development.

5. Summary

This paper defines the conceptual scope of teacher professional ethics, as well as analyzes the impact on teacher behavior and teaching quality, then analyzes the dilemmas of teacher professional ethics in the context of artificial intelligence, including the ethical dilemmas of privacy protection, fairness of student evaluation, and human warmth, etc., and finally gives the corresponding strategies. Artificial intelligence brings opportunities to education and ushers in many challenges. However, the essence of education, the original intention of education remains unchanged, the essence of education is still to cultivate people, and the fundamental task of education is still to establish moral character. We should adhere to the overall development of morality, intelligence, physical fitness, aesthetics and labor, and avoid the "objectification" and "alienation" of technology. In the face of the impact of artificial intelligence technology and the risk of challenges, teachers can not just "ban" or "adopt" all of them, teachers should maintain the original heart and mission of education, not only to play the role of artificial intelligence empowerment, but also to prevent the technology override the people who educate! The relationship between education and technology can be rationally viewed, and the two can be integrated and mutually beneficial. The use of artificial intelligence technology is an important part of further promoting the deep integration of artificial intelligence and education, innovation and development, and better empowering the modernization of education.

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