

Research on the Ethical Dilemma of Teacher-Student Relationship in the Application of AI in Education and the Path to Dissolve It

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Abstract

As education changes with the progress of the times, the advent of the era of artificial intelligence is bound to affect the development of education, and teachers, students and the resulting teacher-student relationship, the two major elements of the teaching system, will inevitably be affected by the ripple effect. Educators need to properly understand AI technology, give full play to its advantages and avoid its negative effects. This paper discusses the model of AI technology in teaching and learning, analyzes and predicts the ethical dilemmas of its application in education on teacher-student relationships, and proposes ways to resolve them.

Keywords

Artificial Intelligence; Ethical Dilemma; Teacher-Student Relationship; Emotion.

1. Introduction

In recent years, the rapid development of Artificial Intelligence technology is bound to and has already brought about a major change in the field of education. People's perception of intelligent technology presents both positive and negative cognitive and practical trends, so there are also some controversies about the depth of Artificial Intelligence technology in education. In essence, it is the relationship between technology and people and the impact of the interaction between the two. The popularity of the microfilm "AI" is accompanied by many discussions because it implicitly expresses the difference between humans and intelligent machines - emotion and temperature. In the discussion of engineering ethics, the human-machine relationship is in a state of contradiction between "opposition" and "symbiosis" [1]. In the discussion of ethics of education and ethics of technology, is the relationship between AI technology and human beings in education in the same way? We will reveal and construct a model of the contingent state of AI technology in education, and discuss the ethical dilemma arising from the human-machine "antagonistic" relationship from the contingent state to the actual problem, and propose a corresponding solution to achieve the purpose of "saving for a rainy day". The aim is to "prepare for the rainy days".

2. Constructing A Contingency State Model for the Application of AI in Teaching and Learning

From an instrumentalist perspective, the essence of AI educational applications is the use of technology as a tool to assist educational teaching and thus enhance educational effectiveness. The construction of this model (see Figure 1) involves the ideal state of the elements of the teaching and learning system under the influence of AI, that is, the benign promotion of technology and machine to education. Under certain rules and circumstances, AI assists teachers in teaching, empowers students in learning, and achieves the corresponding pedagogical goals.

Artificial Intelligence assists teachers in teaching. Artificial Intelligence technology assists teachers in creating an overall learning environment, from the management of student attendance and sign-in (done through face recognition technology), to the supervision and recording of students' learning process (achieved with the assistance of mirror recognition technology), to the submission of students' homework (the use of intelligent teaching platform), which enables teachers to achieve partial liberation from repetitive and tedious teaching work, reducing the burden and shifting to a more refined instructional design.

Artificial Intelligence empowers students' learning. The combination of online and offline helps students better digest, absorb and consolidate what they have learned. Rich intelligent APPs such as Ape Search and Homework Help use voice recognition and image recognition technology to help students answer questions after class. In the form of learning, various intelligent robots become friendly partners of students and accompany them in learning, which to a certain extent avoids the tedium and loneliness of learning. In terms of learning resources, big data technology collects massive information and knowledge, and intelligent analysis technology carries out personalized pushing, expanding the breadth and depth of students' learning resources, facilitating students' personalized learning and independent learning, and advancing their overall development.

Artificial Intelligence facilitates the interaction between the teacher-student community. The interaction between teacher and student community is mainly reflected in the two-way information exchange between feedback given by students and evaluation given by teachers. Artificial Intelligence technology-driven online teaching can provide feedback to teachers on students' learning results in terms of their login status, the number of text clicks, and the length of videos watched. Big data technology can collect students' learning information in many aspects, which provides greater convenience for formative assessment, and along with students' feedback at any time, teachers can do stage assessment instead of just summative assessment at the end of learning.

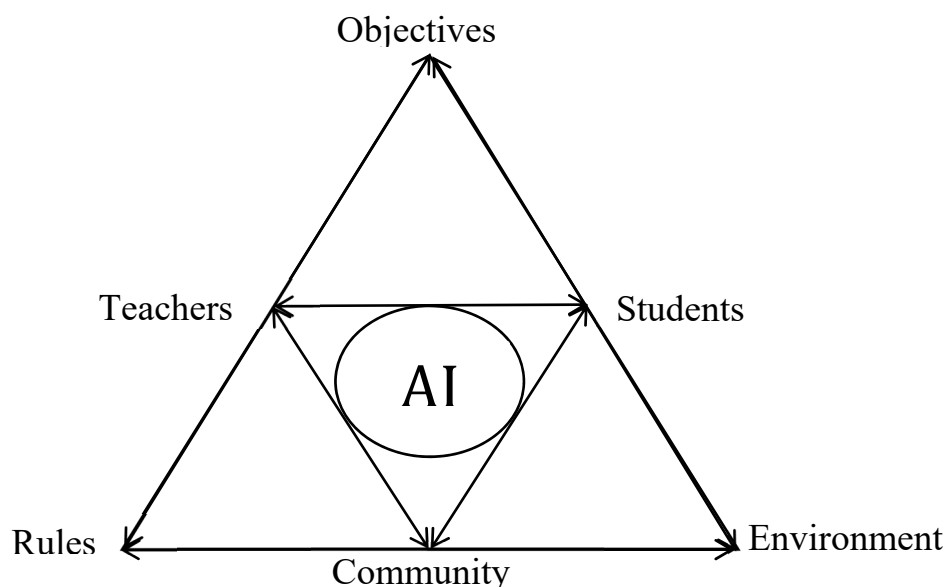


Figure 1. A Contingency State Model for Artificial Intelligence Educational Applications

3. Ethical Dilemmas in Teacher-Student Relationships Raised by the Application of Artificial Intelligence to Education

3.1. Related Concepts of Ethics

Ethics refers to human relationships and their mutual constraints, usually associated with social norms and values. The ethics of ordinary people are more directed to their perceptions and behavioral constraints, however, ethics in educational work has a professional overtone and is meant to motivate teachers and students to uphold the appropriate ethical system [2].

Ethical dilemmas, also known as "ethical problems", are situations in which people in education and teaching, mainly teachers and students, encounter problems in the teaching and learning process that are contrary to their own professional value ethical system [3]. Teachers and students often face various challenges from technology, such as bracketing access and sharing of resources, institutional and policy constraints, especially in the teacher-student relationship in the teaching and learning process, and also involving the mutual constraints of ethical principles themselves, which are ethical dilemmas in the practice of educational work.

3.2. Ethical Dilemmas Raised by Artificial Intelligence

The reason why the application of AI technology to teaching and learning raises ethical dilemmas is that the addition of AI technology triggers changes in some elements of the teaching and learning system, primarily teachers and students, which in turn raises a number of ethical issues.

3.2.1. Ethical Dilemmas on the Part of Teachers

The entry of AI technology into education has led to changes in the role of teachers, and the changes in role have brought about changes in perceptions and behaviors that may pose ethical risks. In terms of perceptions, does the increasing advancement of AI technology create stress and anxiety for teachers? Because humans are not evolving at the same rate as machines. While technology frees teachers from the daily grind, does prolonged "inaction" foster inertia? Will frequent contact with machines cause teachers to lose patience with students, lose interest in teaching, and increase their burnout? In terms of behavior, AI technology will collect information about teachers and students through teaching platforms, such as students' academic performance and interest preferences, teachers' work results and income status, etc. How teachers can ensure that this information will not be leaked, stolen and maliciously used deserves our in-depth consideration.

3.2.2. Ethical Dilemmas on the Part of Students

The entry of Artificial Intelligence technology into education has led to changes in student learning. Will students develop a dependence on technology in their learning styles? While AI technology facilitates students' learning, will students' independent thinking and deep learning skills, literacy, and digestion and comprehension skills deteriorate? In terms of learning content, with the massive amount of information and knowledge flooding in front of students, are students able to distinguish its authenticity and not be disturbed by violent and pornographic information? In the learning environment, how does the technology-supported virtual online learning environment fit into the reality of interpersonal communication, and is there a possibility of causing social barriers for students.

3.2.3. Ethical Dilemmas in the Teacher-student Relationship

The advent of the age of intelligence and the change of physical space has caused a barrier to emotional communication [4]. The development of artificial intelligence technology has made students begin to read screen learning for a long time, a variety of electronic screens hinder the transmission of emotions between students and teachers, face-to-face communication and communication is gradually weakened, teachers cannot perceive the learning status of students

behind the screen, similarly students cannot experience the teacher's voice and smile, teaching physicality becomes less important, and it is like a barrier between teachers and students "wall" between teachers and students. The application of Artificial Intelligence in education brings benefits while also constantly reinforcing the thickness of this "wall", over time, the teacher's willingness to communicate with students' emotions gradually weakened or even disappeared, without the exchange of emotions, teachers can not understand the actual needs of students, students can not feel the teacher's care and thus become indifferent, teacher-student relationship The teacher-student relationship becomes distant.

Artificial Intelligence technology weakens the cultivation and shaping of the personalities of both teachers and students, and disintegrates the proper interpersonal relationship between teachers and students [5]. Artificial Intelligence is after all technology, a machine without feelings and temperature. The formation of personality, well or badly formed, is not and cannot be prescribed in the algorithmic writing of technology. Referring to Kohlberg's moral dilemma story, no matter how it is interpreted how the choice is justified, because human beings are always complex creatures. In the Zhongyong, it is stated that what is ordained by heaven is called nature, what is rate is called the way, and what is cultivated is called teaching [6]. The formation of human nature requires guidance, and the subject of guidance must necessarily involve the participation of equally complex human beings, because technology cannot understand human joy, anger, sorrow, love and hate, and only teachers who are human beings can cultivate and shape students' personality, values, creativity, imagination, etc.

4. The Path of Solving the Ethical Dilemma of Teacher-Student Relationship in the Era of Artificial Intelligence

In order to solve the above ethical dilemma, we mainly consider the following three paths in order to achieve the appropriate state for the educational application of AI technology.

4.1. Path 1 Insist on ethical reflection and cultivate key human qualities

Teachers and students should engage in ethical reflection, get rid of their dependence on technology, and ensure dominance in the teaching of human-computer collaboration. Teachers improve their AI literacy, should take the initiative to recognize and learn AI, and strengthen their understanding and application of the technology; students exercise their critical thinking and systemic thinking skills, and dare to question AI, which currently only targets a single narrow field unable to solve problems across domains.

4.2. Path 2 Cultivation of ethical feelings between teachers and students

The application of Artificial Intelligence technology in teaching has caused the alienation of teacher-student relationship, and it is necessary to cultivate the ethical feelings between teachers and students. Teachers need to take the rational component of teacher-student ethics, uphold the spirit of "learning and teaching", be a model for students, teach according to their abilities, take care of their individuality, and love their students with love and care. At the same time, teachers should turn their attention to students' communication skills, creative skills, and emotions and values. Students should abide by the norms of learners, respect and honor their teachers; be sensitive and good at learning, not be ashamed to ask questions, be persistent, maintain a love of learning, and live and learn. Teachers and students are expected to communicate their emotions and concerns based on love.

4.3. Path 3 Construction of Ethical Principles for Educational AI

The application of AI technology to teaching and learning should build ethical principles, regulate its "behavior", and clarify the "can" and "cannot" of AI technology [7]. Firstly, to carry out ethical education on AI to ensure that people have the right understanding of the technology;

secondly, to establish the principles of accountability, privacy, non-harm, fairness, early warning and stability that should be followed for AI in education [7]; finally, to play the role of restraint and management of law to sanction the "transgressions" of AI technology and the related responsible subjects [8]. " and related responsible subjects to be sanctioned, adhere to the people-oriented, student-oriented, to ensure the safety and development of people.

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