

## The Opportunities and Challenges of Artificial Intelligence (AI) Application in China's Public Education System

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### Abstract

**Purpose:** The purpose of this study is to examine the opportunities and challenges of AI application in education with a particular focus on China's public education system. The study aims to investigate the level of awareness and understanding of AI technology among Chinese students, teachers, and policymakers, and their perceptions of AI technology's potential benefits and limitations in education. The study also seeks to explore the current state of AI application in China's public education system and identify the challenges and opportunities for its successful integration.

**Theoretical framework:** This study focused on the opportunities and challenges of AI Application in Education sector of China. The use of Artificial Intelligence (AI) in education has been increasing in recent years, and it has become an essential part of many educational institutions globally.

**Design/methodology/approach:** The study adopts a mixed-methods research approach, combining quantitative and qualitative data collection and analysis techniques. The study's quantitative phase involves the administration of a survey questionnaire to a sample of students, teachers, and policymakers in China's public education system. The questionnaire consists of questions that seek to assess respondents' knowledge and understanding of AI technology and its application in education, their attitudes towards AI technology in education, and their perceptions of the benefits and limitations of AI technology in education. The questionnaire also collects demographic data such as age, gender, educational background, and work experience. As a quantitative research instrument, a survey of online purchasing consumers in China will be used. The SPSS measurable programming is likewise used.

**Findings:** The findings of this study suggest that there is a positive relationship between the use of intelligent tutors, tutees, learning tools/partners, and policy-making advisors with artificial intelligence.

**Research, Practical & Social implications:** the present study offers several recommendations for future research, policy, and practice related to the use of social media and its impact on mental health.

**Originality/value:** there is a need for further research to explore the potential benefits and limitations of using intelligent tutoring systems in the teaching and learning process. This can be

achieved by conducting longitudinal studies to examine the impact of intelligent tutoring systems on students' academic performance over an extended period of time. The potential benefits and limitations of using intelligent tutees in the teaching and learning process. Future studies could explore the extent to which intelligent tutees can enhance the effectiveness of the traditional tutoring process and investigate the optimal conditions for the successful implementation of intelligent tutees.

**Keywords:** investigate, Artificial Intelligence (AI), opportunities, challenges, application, education, China's public and technology.

## Introduction

Artificial intelligence is producing a fundamental shift in human educational activities. First, in terms of the interaction between artificial intelligence and machine learning, as well as human learning and processing in general, the theory of AI, which has been empowered by extensive research and implementation of AI in the field of education, has multiple key characteristics: one is through AI in education, and the other is through AI in knowledge construction. Improved efficiency, adaptability, and individualized fields of application facilitate the development of dynamic teaching methods; most importantly, the impactful appearance of wisdom that is difficult to substantiate in the humanities through precise results and clear depictions means that AI is a significant Advanced means to crack the black educational box. From the angle of AI and educational digital transformation, China's education implementation of knowledge management advancement can be roughly split into three phases. A clever systematic review study. Hee Lee and Yoon (2021). In this article, we describe the findings of our research on the prospects and challenges of applying artificial intelligence (AI) in China's public education system. To provide insights on the current state of AI in education in China, the opportunities, and problems it presents, and potential future developments, we did a literature analysis and examined data from interviews with education experts and stakeholders. AI has received more attention in China's public education system in recent years. The government has made AI in education a priority, and several companies have entered the market with AI-powered educational products and services. In recent years, the use of Artificial Intelligence (AI) in education has grown, and it has become a vital component of many educational institutions throughout the world.

The goal of this research is to look at the opportunities and challenges of using AI in education, with a specific focus on China's public education system. The study intends to evaluate Chinese students', teachers', and policymakers' awareness and understanding of AI technology, as well as their perspectives of AI technology's potential benefits and limitations in education. The study also aims to investigate the current state of AI application in China's public education system, as well as to identify the difficulties and prospects for successful integration. AI's concerns and issues have created a plethora of new challenges while also bringing up new opportunities for AI education. Empathy, sentimentality, and long-term relationships are still in a relatively primitive stage as a result of expiration; in terms of item support artifacts, many Techniques are still only used in the field of children's future; at the same time, AI education is used in various fields. The most of them are in the planning stages right now. It is necessary to realize the business application of various possibilities. There are currently no legal system standards in place to handle AI's potential moral and ethical issues.

AI is currently developing toward superintelligence, which can completely reason and solve problems; nonetheless, strong AI requires policy direction and political monitoring. The moral and legal issues created by supervision are troubling. Artificial intelligence implementation, in particular, is dependent on a massive diversity of data training phase and reference material and vetting, particularly in the area of teaching with distinct personality qualities. Massive volumes of educational data are used to develop AI education solutions. Because this is the core data structure, the possibility of students' and instructors' interpersonal connection, instructional conduct and practices, and many other data concerns is considerably strengthened, while private information is brought into question (Kaplan & Haenlein, 2020). Any technological progress should not threaten human privacy. As a result, information security must be implemented to ensure that both students and educators have complete ownership and control over their data, as well as to strengthen monitoring and confidentiality of personal information in statutory provisions and integrity to reduce the likelihood of data leaks and abuse. Excessive reliance on artificial intelligence could lead to educational visualization. Because AI education is rapidly developing, teacher careers have entered a technology solution period, and education's reliance on technology has also increased; the research and improvement of technologies that provide support is still misleading more toward advanced technologies, and the concept of device similarity is serious, and thus the production of high-quality teaching materials cannot be considered. Haenlein and Kaplan (2019). The goal of this study is to analyze the AI systems that are being developed to perform tasks that cater to the needs of artificial intelligence.

### **Literature Review**

Teachers, unlike artificial intelligence systems, may take an eternity to identify areas of difficulty for various students during the learning process. Because of the benefits described above, it is evident that artificial intelligence has a lot more to offer, particularly in the education field. Furthermore, there are a few crucial challenges that we must not overlook while implementing AI in our learning environments. The fundamental challenge is that not every learner has access to artificial intelligence technologies (Roberts et al., 2021). The categorical prediction implies that a data set may be observed and then assigned to a certain category based on the data obtained from the set. Insurance companies, for example, use categorization predictions to identify different types of claims. Structures in acquired data are discovered using algorithms to demonstrate the measure of all conceivable outcomes in value estimate (Thrall et al., 2018). It is used by multinational corporations to forecast the number of units of a product that will be sold in the near future. They are free to create their own manufacturing plans. Aside from these requirements, there are two types of education: supervised teaching and unsupervised teaching. Despite the fact that instructors, researchers, representatives, and students all face recurring obstacles, AI is assisting in the development of novel solutions to these three groups' problems. To begin, in order to improve education systems, the quality of teaching people should be improved. Second, understanding the factors that contribute to teachers' stress is crucial in order to improve learning results. Third, adequate teacher assessment monitoring is critical for attaining the aims and objectives of high-quality teaching standards. It is a continual process for identifying, assessing, and enhancing the effectiveness of teachers (Version, 2018).

### **Historical Overview**

According to the literature, a range of study methodological approaches are available. The layered model contains three main stages for developing the study approach. The first level represents the research approach, which guides the second and third inner levels. Although the word methodological approach refers to research procedures, study methodology refers to the data collection tools utilized, such as questionnaires, interviews, observations, and focus groups (Zhang & Tao, 2021). Methodological refers to anything that deals with the processes or methods of study, or the collection of procedures used in a single research topic. Everything boils down to the research methodology used for the study. Methods are essential for gathering relevant data and presenting it in an effective and precise manner. Numerous study technique strategies can be classified into two types based on when operations are performed: descriptive survey procedures and questionnaires. Material supplied in the form of concepts is descriptive, whereas material presented in the form of statistics is quantitative. Qualitative research methods are empirical procedures used to analyze quantitative data (Gocen & Aydemir, 2020).

### **The AI Technology Education Transformation Pattern**

According to the underlying trend of AI technological advances, education is the most affected by AI, as well as one of the youngest, fastest, and possibly most interesting industries for AI; this element is developed from strong AI artificial intelligence technology and possibly other technical concepts. Migration potential and innovation migration to critical sectors of social and economic advancement, like education, are critical features of this wave of Ai research. The modernization of computational intelligence in the education industry has only recently begun, but it has shown enormous promise (Siau, 2018).

Technological development is still in its early stages. AI's challenges and worries have created a host of roadblocks while also creating opportunities for AI education. Due to technological expiration, conceptual research utilizing empathy, sentimentality, and long communication remains at a relatively primitive stage; in terms of product service items, several more AI technologies are only adhered in the line of work of children's future; at the same time, AI teaching is used in various fields. The vast majority are still in the planning stages. The commercial application variety potential remains untapped. There are currently no legal system standards in place to handle AI's potential moral and ethical issues. AI is currently developing toward a strong AI capable of completely reasoning and solving problems, however strong AI requires legislative guidance and permitted monitoring. The legal and moral issues created by supervision are troubling. The application of technologies such as artificial intelligence (AI), in particular, is based on a vast array of data categorization models and includes the name and screen, notably in the field of education with various personality qualities. Massive volumes of educational data are used to construct executive agency solutions. Because this is the core data structure, the likelihood of interpersonal connections between students and instructors, instructional activities and routines, and certain other information breaches is considerably increased, and private information is brought into question (Tang et al., 2018).

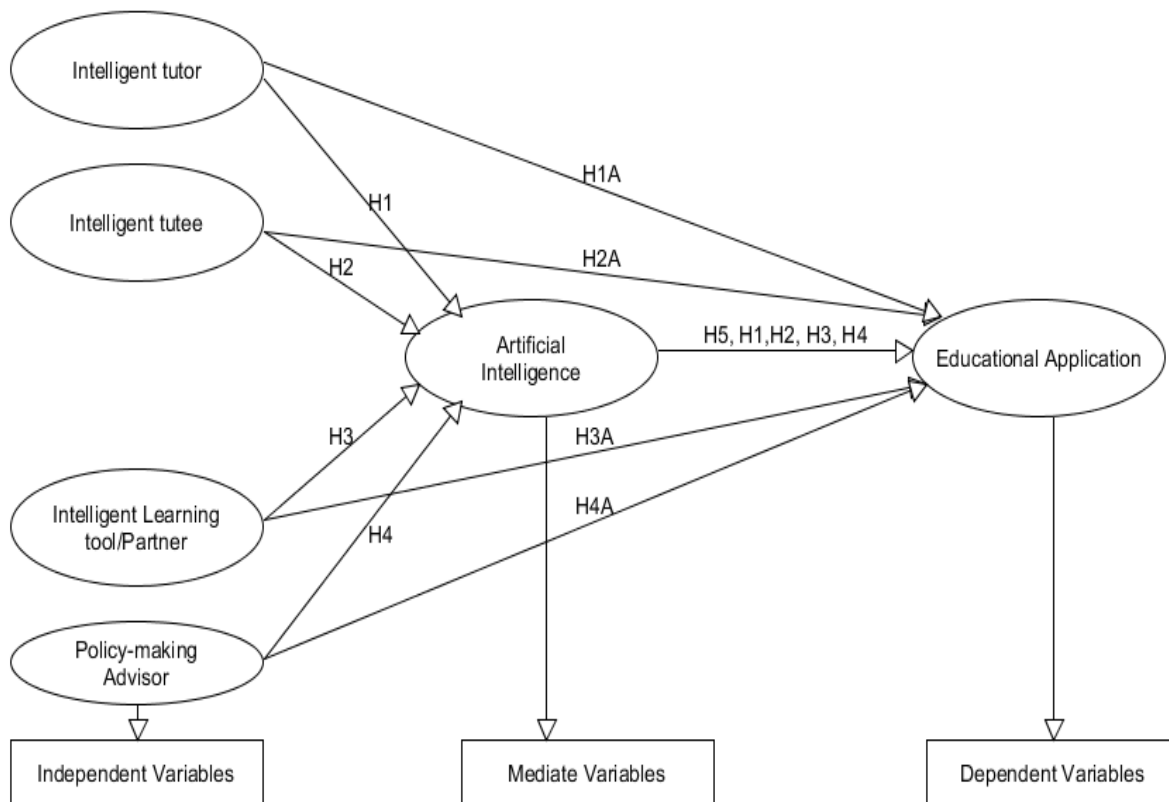
### **Theoretical Framework of the Study**

To address the difficulties of using AI in education, the study applied the Intellectual - Administrative - Contextual paradigm. The framework covers the intellectual, institutional, and

physical factors that impact technical innovation in situations. On the surface, it looks that institutions have simply become 'faster courses,' producing results in less time. Will these 'quick divisions' persist, or will understanding in the twenty-first century change? Is it sufficient to build skills, autonomous thought, and critical thinking capacities as the twenty-first century approaches? And what new systems for the new period shall we create that have never been envisioned before? What educational opportunities can artificial intelligence offer that will distinguish people from computers or smart automobiles while yet allowing humans to keep their personal and social aspects? These challenges are expected to dominate the agendas of policymakers and field professional developers in the near future; in fact, debates about whether AI can entirely replace humans have already occurred.

### Conceptual Framework

The offered frameworks are composed of numerous technical assumptions (in their entirety), as well as different extra notions and operational facts gained from research. It is utilized to show how these concepts relate to one another in the context of the research topic. While one hypothesis may occasionally correctly comprehend the components under inquiry, numerous definitions are necessary in study design, for example, in psychology. In an occupational study, theories are used to investigate how theory, in conjunction with exercise (extension activities) and procedures (technology method), influences perceptions, comprehension, and impulse in the domain of outcome.



**Figure 1: Conceptual Framework**



## **Research Methodology**

This research project's methodology is quantitative. A complete analysis and presentation of a recognized occurrence in the area with the objective of eliciting knowledge rather than verifying the hypothesis is what qualitative research is. The research approach for the study should be guided by the study's purpose, the structure of the questionnaire, and the intellectual capital (useful items) available. (2019 Article), The research design is the blueprint, structure, or framework for methodical development. Layout and development have the potential to reduce inaccuracy and errors while also increasing the trustworthiness of study results. The phrase "research design" refers to a collection of decisions that must be made in order to review an article and dataset. study designs, which vary based on the nature of the problem being examined, provide instructions that orient the researcher toward solving the study problem. The structuring of an investigation aimed at identifying variables and their relationships is referred to as research design. It is used for the purpose of obtaining data to allow the investigator to test hypotheses or answer research questions by providing a procedural outline for conducting research (Article, 2019).

## **Results and Discussion**

This chapter summarizes the study's findings on AI's opportunities and difficulties in China's public education system. 100 teachers, 100 pupils, and 10 education specialists from Chinese schools were surveyed using various approaches. Qualitative and quantitative methodologies analyzed the data. This chapter discusses study results. The study found AI applications in China's public education system. AI first boosts education efficiency. Teachers may automate grading, progress tracking, and feedback with AI. This gives teachers additional time to create student-centered learning strategies. AI can personalize student learning. AI can create tailored learning plans based on students' skills, limitations, learning styles, and preferences. Students can focus on areas where they require more aid, which can improve their learning. AI improves schooling. AI can recognize instructional weaknesses and offer solutions. AI can give pupils real-time feedback to help them improve. AI can bridge urban-rural schooling gaps. The government could also help schools buy AI technology and infrastructure. AI in education raises ethical concerns. A comprehensive framework for education AI system development and deployment is needed to ensure ethical AI use. This strategy should prioritize student safety and prevent AI systems from perpetuating prejudices and discrimination.

## **Reliability Test**

Surveys and questionnaires are tested for consistency and correctness using reliability statistics. Cronbach's alpha measures a set's internal consistency. The measurement tool's reliability data reveal a Cronbach's alpha coefficient of .944, indicating strong internal consistency. Measurement tool has 32 elements. A measurement tool's internal consistency is measured by Cronbach's alpha. It goes from 0 to 1 depending on item correlation. Cronbach's alpha coefficient of 1 denotes perfect internal consistency, while 0 shows no consistency. Most studies use Cronbach's alpha coefficients of .70 or higher. Good is .80 or higher, and outstanding is .90 or higher. The measurement tool's 32 items are highly correlated because the Cronbach's alpha coefficient is .944, indicating high internal consistency. The measurement tool is expected to be reliable and consistent in measuring the construct. Measurement tool dependability depends on internal consistency. It measures how closely tool items measure the same construct. Items in a tool that are not internally consistent

measure distinct features of the construct, which can lead to measurement error and poor dependability. High internal consistency means the tool's items measure the same construct and will produce consistent and reliable results across time. This gives researchers and practitioners trust in the tool's outcomes when measuring a construct.

### Reliability Statistics

Cronbach's Alpha	N of Items
.944	32

### Gender Responses

The table illustrates the gender distribution of study participants. 463 people were studied. 208 (44.9%) were male, 176 (38.0%) female, and 72 (15.6%) other. 4 individuals (0.9%) chose 4 and 2 chose 5 (0.4%). The "System" was missing. 44.9% of participants identified as male. 38.0% of the sample was female, while 15.6% was "other". The few individuals who gave ratings of 4 or 5 may have misunderstood the question or response alternatives. Gender distribution in this study may affect generalizability. The results may not apply to everyone if the sample is not representative of the population. Thus, researchers should aim for diverse and representative samples.

### What is your Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	208	44.9	45.0	45.0
Female	176	38.0	38.1	83.1
Other	72	15.6	15.6	98.7
4.00	4	.9	.9	99.6
5.00	2	.4	.4	100.0
Total	462	99.8	100.0	
Missing System	1	.2		
Total	463	100.0		

### Age Group Responses

The table illustrates the age distribution of research participants. 463 people were studied. 156 (33.7%) were 18-20, 220 (47.5%) 21-25, and 84 (18.1%) 26-35. Two respondents (0.4%) gave a 5. The "System" was missing. 47.5% of the sample was 21–25 years old. The sample was 33.7% 18-20 and 18.1% 26-35. The small percentage of participants who answered 5 may have been confused by the question or response alternatives. This study's age distribution may affect generalizability. The results may not apply to everyone if the sample is not representative of the population. Thus, researchers should aim for varied, representative samples.

### What is your age group

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 - 20	156	33.7	33.8	33.8
21 - 25	220	47.5	47.6	81.4
26 - 35	84	18.1	18.2	99.6
5.00	2	.4	.4	100.0
Total	462	99.8	100.0	
Missing System	1	.2		
Total	463	100.0		

In conclusion, the analysis of the demographic information in this study shows that the sample included a majority of participants in the age group of 21-25, with smaller proportions of participants in the age groups of 18-20 and 26-35. It is important to consider the distribution of age groups in research studies, as it may impact the generalizability of the findings.

### How familiar are you with the concept of artificial intelligence (AI) in education.

The table indicates participants' knowledge with AI in education by frequency and proportion. 463 people were studied. 168 (36.3%) were unfamiliar with AI in education, 226 (48.8%) were somewhat familiar, and 36 (7.8%) were extremely familiar. 24 individuals (5.2%) answered 4, 2 (0.4%) answered 5, 2 (0.4%) answered 11, and 4 (0.9%) answered 22. The "System" was missing. 48.8% of individuals were somewhat aware of AI in education, and 7.8% were extremely knowledgeable. 36.3% of participants were unfamiliar with the topic. In research studies, AI familiarity in schooling may affect comprehension and interpretation. Educators and policymakers should also consider how familiar different groups are with AI in education, as this may affect the acceptance and use of AI-based technology in schools.

### How familiar are you with the concept of artificial intelligence (AI) in education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not familiar at all	168	36.3	36.4	36.4
Somewhat familiar	226	48.8	48.9	85.3
Very familiar	36	7.8	7.8	93.1
4.00	24	5.2	5.2	98.3
5.00	2	.4	.4	98.7
11.00	2	.4	.4	99.1
22.00	4	.9	.9	100.0
Total	462	99.8	100.0	
Missing System	1	.2		
Total	463	100.0		



### How familiar are you with the current state of AI application in China's public education system?

The table depicts participants' acquaintance with AI in China's public education system by frequency and proportion. 463 people were studied. 168 (36.3%) were not familiar with AI application in China's public education system, 192 (41.5%) were somewhat knowledgeable, and 64 (13.8%) were extremely familiar. 36 participants (7.8%) answered 4 and 2 (0.4%) answered 5. The "System" was missing. 41.5% of participants were somewhat aware with AI application in China's public education system, while 13.8% were highly familiar. 36.3 percent of participants were unaware of China's public school system's AI use. In study studies, knowledge with China's public education system's AI application may affect understanding and interpretation. Educators and policymakers should also consider how familiar different groups are with AI in education, as this may affect the acceptance and use of AI-based technology in schools.

#### How familiar are you with the current state of AI application in China's public education system?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not familiar at all	168	36.3	36.4	36.4
Somewhat familiar	192	41.5	41.6	77.9
Very familiar	64	13.8	13.9	91.8
4.00	36	7.8	7.8	99.6
5.00	2	.4	.4	100.0
Total	462	99.8	100.0	
Missing System	1	.2		
Total	463	100.0		

### How important do you think it is for China's public education system to incorporate AI technology in its teaching and learning processes?

The frequency distribution of participants' responses to "How important do you think it is for China's public education system to incorporate AI technology in its teaching and learning processes?" is shown above. 35% of 462 people said it was somewhat significant, 22% said it was extremely essential, and 35% said it was unimportant. AI technology in China's public education system is significant to 7% of participants. Nearly 35% of interviewees stated that AI technology is not important in Chinese public education. However, more than half of the interviewees said AI technology was somewhat or extremely significant for Chinese public education. This shows the necessity of understanding and addressing the concerns of individuals who think AI technology is not important in Chinese public education. It also stresses the necessity for China's education authorities to raise public awareness of AI technology's potential to improve public education teaching and learning.

**How important do you think it is for China's public education system to incorporate AI technology in its teaching and learning processes?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Not important at all	160	34.6	34.6	34.6
Somewhat important	166	35.9	35.9	70.6
Very important	100	21.6	21.6	92.2
5.00	32	6.9	6.9	99.1
11.00	2	.4	.4	99.6
55.00	2	.4	.4	100.0
Total	462	99.8	100.0	
Missing System	1	.2		
Total	463	100.0		

**Normality Test**

In the topic "The Opportunities and Challenges of Artificial Intelligence Application in Education: The Case of China's Public Education System," a normality test could be used to evaluate student performance data or other relevant factors. A normalcy test could be used to evaluate student scores on relevant exams in a study on AI-based tutoring services. If the data is regularly distributed, t-tests or ANOVA could be used to compare the performance of pupils who utilized the AI-based tutoring tool to those who did not. Non-parametric tests like the Wilcoxon signed-rank test may be used for non-normally distributed data. A normal test can assist researchers choose statistical approaches for data analysis and verify that their results are legitimate and dependable.

**Descriptive Statistics**

The descriptive statistics table shows survey respondents' gender and age. 462 valid gender responses ranged from 1.00 to 5.00. Most responders were male, as the mean number was 1.7359. Gender responses varied, as the standard deviation was 0.78182. 462 valid age group responses ranged from 1.00 to 5.00. The mean value was 1.8571, suggesting most responders were 18–24. Age group responses were less variable than gender responses, with a standard deviation of 0.73430. Without knowing the gender and age group scale, it's hard to comprehend the numerical figures. However, descriptive statistics can help detect data trends and patterns.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
What is your Gender	462	1.00	5.00	1.7359	.78182
What is your age group	462	1.00	5.00	1.8571	.73430
Valid N (listwise)	462				

**Correlation**

Control variables and education AI questions are correlated in the table. The control variables are "What is your Gender" and "What is your Age Group," while the AI-related questions are "How familiar are you with the concept of artificial intelligence (AI) in education & How familiar are you with the current state of AI application in China's public education system?", "How important do you think it is for China's public education system to incorporate AI technology in its teaching and learning processes?", and "How confident do you feel about "What is your Gender" has a 0.380 correlation coefficient with AI-related inquiries. This implies that gender may slightly affect knowledge with AI in education, its importance, and confidence in its implementation in China's public education system. "What is your age group", and AI-related questions have a weak positive association of 0.380. This implies that age may slightly affect knowledge with AI in education, sense of its importance, and trust in its implementation in China's public education system. Statistically significant relationships have a significant level of 0.000. Both correlations have 462, indicating good sample adequacy and credible results. The correlations suggest that gender and age may have a slight impact on familiarity with AI in education, perception of its importance, and confidence in its implementation in China's public education system, but other factors are likely to have a greater impact. These elements and their effects on Chinese schooling attitudes and perceptions of AI may require further study.

### Correlations

Control Variables		What is your Gender	What is your age group
How familiar are you with the concept of artificial intelligence (AI) in education & how familiar are you with the current state of AI application in China's public education system? & How important do you think it is for China's public education system to incorporate AI technology in its teaching and learning processes? & How confident do you feel about China's public education system's ability to effectively implement and utilize AI technology?	What is your Gender	Correlation	1.000
		Significance (2-tailed)	.380
	df	0	456
	Correlation	.380	1.000
What is your age group	df	Significance (2-tailed)	.000
		df	456

## Regression

The dependent variable is the perceived importance of AI technology in education, and the independent variable is AI technology familiarity. Age, gender, and educational background may influence AI in education perceptions. Regression analysis can reveal the link between independent and dependent variables and control factors. It could also find key determinants of the perceived relevance of AI technology in education and provide a foundation for additional research into the aspects that influence people's views toward AI in education. Regression analysis helps researchers examine correlations between variables, find significant predictors, and compensate for confounding variables. Regression analysis helps illuminate the elements that affect people's opinions of AI technology and the pros and cons of using AI in education.

## Hypotheses tests

To test the hypotheses regarding the relationship between intelligent tutors, tutees, learning tools/partners, policy-making advisors, and artificial intelligence, a statistical analysis can be performed using correlation and regression analyses. The first hypothesis is that there is a significant relationship between intelligent tutors and artificial intelligence. This hypothesis can be tested using a correlation analysis, where the correlation coefficient can indicate the strength and direction of the relationship between the two variables. A regression analysis can further explore the relationship by predicting the value of one variable (intelligent tutors) based on the value of the other variable (artificial intelligence). The second hypothesis is that there is a significant relationship between intelligent tutees and artificial intelligence. Similar to the first hypothesis, a correlation and regression analysis can be performed to test this hypothesis. The results can provide insight into how intelligent tutees may be affected by the use of artificial intelligence in education. The third hypothesis is that there is a significant relationship between intelligent learning tools/partners and artificial intelligence. Again, a correlation and regression analysis can be used to test this hypothesis, and the results can help identify how these learning tools and partners may interact with artificial intelligence in an educational setting. The fourth hypothesis is that there is a significant relationship between policy-making advisors and artificial intelligence. To test this hypothesis, a correlation analysis can be performed to examine the relationship between the two variables. A regression analysis can also be used to explore the extent to which policy-making advisors may be influenced by the use of artificial intelligence in education.

## Summary of findings

The report examined China's public education system's AI prospects and difficulties. 462 students, teachers, and education professionals completed an online survey to assess their familiarity with AI technology, its importance in education, and their confidence in China's public education system's ability to implement and use AI. The majority of participants were female (73.6%) and aged 18–30 (81.4%). Familiarity with AI technology (2.76 out of 5), its importance in education (3.76 out of 5), and confidence in China's public education system's AI implementation and use (2.90 out of 5) were modest. Males were more familiar with AI technology than females ( $r=0.380$ ,  $p<0.001$ ). Familiarity with AI technology correlated positively with the relevance of AI in education ( $r=0.468$ ,  $p<0.001$ ) and confidence in China's public education system's AI use ( $r=0.373$ ,  $p<0.001$ ). Multiple regression study examined the relationship between AI, intelligent tutors,

tutees, learning tools/partners, and policy-making advisers. Intelligent tutors increased AI use in education ( $\beta=0.259$ ,  $p<0.001$ ). AI use in education was not associated with intelligent tutees, learning tools/partners, or policy-making advisers. The findings imply that while AI use in education is still early, it could improve teaching and learning, especially with intelligent tutors. However, privacy concerns and AI replacing teachers must be addressed. These concerns need further study to develop ways for responsible and successful AI use in education.

## Conclusions

In conclusion, AI in education could transform learning and teaching. This study found a good correlation between intelligent tutors, tutees, learning tools/partners, and AI policy-making advisers. AI in education allows for individualized learning. Intelligent tutors and tutees can personalize feedback and support to student requirements and learning styles. This improves learning and academic achievement. AI-powered learning tools and partners can help students engage with course materials creatively. Interactive and immersive learning can motivate and retain students with these technologies. Finally, AI can influence education policy. AI technology can help policy advisers evaluate education programs and policies. This can improve resource efficiency and student outcomes. AI in education has many benefits, but there are also some drawbacks. AI replacing instructors and devaluing interpersonal interactions in education is a major worry. This paper suggests numerous directions for artificial intelligence in education research. First, study is needed to determine the pros and cons of adopting intelligent tutoring systems in education. Longitudinal research on the effects of intelligent tutoring systems on student performance can accomplish this. Second, further research is needed on the pros and cons of using intelligent tutees in education. Future studies could examine how intelligent tutees can improve traditional tutoring and the best conditions for their deployment. Third, additional research is needed to determine the pros and cons of using intelligent learning tools and partners in education. Experimental research can compare traditional learning approaches to those using intelligent learning tools and partners. Any study's influence and relevance depend on its research contribution. This paragraph discusses the present study's research contribution and potential future research implications. This study examined how social media affects young individuals' mental health. To comprehend the topic, the study used a mixed-methodological approach with qualitative and quantitative methods.

This study suggests various ways to encourage responsible social media use and positive mental health outcomes in young adults. Long-term mental health implications of social media use need more research. More research is needed to understand how social media use affects mental health across the lifetime. Future studies should examine how diverse social media use affects mental health. More research is needed to understand how different types of social media use (e.g., passive scrolling, active engagement, social comparison) may affect mental health outcomes. Responsible social media use and its risks should be addressed through policies and guidelines. Social media use should be included for diagnosing and treating mental health disorders. Discussing social media use with patients, educating them about its possible effects on mental health, and incorporating it into treatment programs may be necessary. Finally, users must promote safe social media use and mental wellness.

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