

AI Determinants of Organizational Performance of English Training Institutions in China

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Annotation. Using a multivariate multiple linear regression analysis, this study examines the effect of AI adoption measures (organizational AI investment, intelligent tutoring systems, adaptive learning platforms, culturally sensitive AI tools, & faculty training in AI) on the different metrics of organizational performance (student enrollment growth, personalized learning experience, enhanced student engagement, improved teaching efficiency, & organizational revenue growth) of China's English training institutes. The study findings reveal that AI incorporation significantly improves the organizational performance of English training institutions in China, illuminating the strategic role of investing in AI-driven technologies such as adaptive learning platforms, organizational AI investment, culturally sensitive AI tools, intelligent tutoring systems, and faculty trainings in AI. In specific, intelligence tutoring systems and adaptive learning platforms exhibit the most substantial effect on organizational performance, validating their versatility and effectiveness in supplementing both financial/economic and educational performance. Similarly, culturally sensitive AI tools result in improved student engagement and inclusivity, emphasizing the importance of cultural considerations in AI integrations. Besides this, organizational AI investment and faculty training in AI also play a pivotal role, particularly in fostering personalized learning experience and organizational revenue growth. Thus, the research inferences proposed in this study put forward useful theoretical and practical implications for educators, policymakers, and business managers. AI adoption acts as a strategic tool to address long-run issues associated with enrollment stagnation, cost inefficiencies, business operations, and financial performance. Therefore, institutional managers must perceive AI not merely as a technological upgrade but as an integral element of organizational strategy that supports operational efficiency, financial sustainability, and long-term growth.

Keywords: artificial intelligence, English training institutions, revenue growth, organizational performance, China.

JEL classification: C45, O33, M3, D2, D83.

Introduction

The integration of AI into different sectors has been one of the most transformative developments (Zong, Guan, 2024). AI-oriented technologies are reforming traditional learning and teaching paradigms, providing novel prospects for operational efficiency, personalized learning, and data-driven decision-

making (Amin, Uddin, 2023). In China, English training institutes, which have persistently played an imperative role in addressing the rising demand for English proficiency, are at the forefront of this technological revolution. The rise of AI-oriented tools such as natural language processing, intelligent tutoring systems, and adaptive learning platforms holds the potential to reshape how English is learned in China (Alangari, 2024). Driven by globalization, the aspirations of Chinese families to offer their children a competitive advantage, and the increasing significance of English in professional and academic settings, the English training market has grown substantially in China over the past two decades. Nevertheless, challenges, including high operational costs, regulatory scrutiny, and uneven instruction quality, have also accompanied this growth (Truby, 2020). At present, the advent of artificial intelligence constitutes both challenges and opportunities for English training institutes (Hwang *et al.*, 2020) as these organizations navigate the complexities of integrating emerging technologies into their operations while maintaining competitiveness.

Amidst shifting market competition and evolving business demands, English training institutions are grappling with persistent management problems in China, including rising operational costs, inefficient allocation of resources, stagnant enrollment, and limited financial growth. Such challenges not only weaken institutional sustainability but also uncover systemic inefficiencies in the decision-making, financial systems, and performance management of the organizations. Accordingly, the strategic integration of AI has emerged as a potential tool for organizational transformation. Simultaneously, AI adoption supports operational optimization and produces scalable economic value, navigating the intersection of technological innovation and strategic management. Based on this, AI should not be solely perceived as an auxiliary technological instrument but as an integral part of a comprehensive management strategy meant to resolve both financial and management underperformance of the organization. Hence, this research adds to a growing body of literature that repositions artificial intelligence as a vital solution to fundamental management issues, thereby, providing useful insights for educational leaders navigating the evolving landscape of English training institutions in China.

The rapid development of AI has brought notable changes, with substantial implications for English training institutes (Wu *et al.*, 2020). The demand for English proficiency has been supplemented since China continuously expands its role in the international economy, creating both challenges and opportunities for English training institutes (Wang, 2012). The incorporation of artificial intelligence into educational institutes has the potential to optimize the processes of language acquisition. However, such integration not only disrupts the current business models but also raises various concerns related to the sustainability of traditional business activities. In recent years, several public and private English training institutes have emerged in China, offering different programs catering to diverse proficiency levels and age groups (Pan, 2015). Over the period, traditional classroom-oriented learning has evolved to adopt blended and online learning models, making education more flexible and accessible (Jin, Zhirui, 2017). Nonetheless, given the rapid development of artificial intelligence, the education industry is facing a paradigm shift, warranting English training institutes to adapt to trends of emerging technologies. Meanwhile, emerging technologies such as AI are substantially reshaping the operational models, pedagogical methods, and business strategies of English learning institutes in China (Knox, 2020). Incorporating AI-supported adaptive learning systems allows institutes to extend customized learning pathways, thus more effectively meeting the needs of individual learners than traditional approaches, increasing learners' motivation and engagement (David, 2024). Despite such advancements, there persist concerns associated with technological advancements, such as possible displacement of human teachers, ethical considerations, and data security. As a result, a critical analysis of the effect of artificial

intelligence on organizational performance is imperative to comprehend its implications for sustainability, efficiency, and cost-effectiveness.

The global shift towards AI adoption in the business sector is driven by the need to bridge existing gaps, enhance efficiency, and improve organizational outcomes (Singh *et al.*, 2025; Fedro *et al.*, 2019). Characterized by its competitive nature and a need for high-quality English training, China offers a fertile landscape for AI-oriented innovations (Arenal *et al.*, 2020). Nonetheless, in spite of the enthusiasm surrounding AI integration, there still remains a need for empirical investigation to comprehend the effect of AI on the performance of English training institutions using metrics such as enhanced student engagement, student enrollment growth, personalized learning experience, organizational revenue growth, and improved teaching efficiency.

The influence of artificial intelligence on teaching and learning activities is a subject of global scholarly interest (Fadhel *et al.*, 2024; Maphosa, Maphosa, 2023; Chen *et al.*, 2020). However, its implications for English training institutes in China remain understudied. This paper attempts to fill this research gap by thoroughly analyzing the existing operational situations of English teaching institutes under the impact of artificial intelligence. By investigating the employment of AI, the challenges encountered, and the strategies adopted to overcome these challenges, this study intends to contribute to the extant literature on artificial intelligence and offer valuable insights for different stakeholders in English training institutions in China. The findings of this research are especially valuable, owing to the distinct attributes of the Chinese economy, including its scale, cultural context, and regulatory environment. Since artificial intelligence continuously evolves, comprehending its effect on English training institutes is useful for academicians, managers, policymakers, and business leaders.

This research makes several valuable contributions to the domain of AI and organizational performance. Firstly, this paper offers an in-depth analysis of the present state of AI incorporation in English training institutes in China, providing useful insights for practitioners, researchers, and business managers. Secondly, this study identifies the distinct challenges experienced by these institutes in embracing artificial intelligence, adding to the growing body of studies on the hurdles to AI employment in the education sector. Finally, this paper also puts forward practical strategies for leveraging artificial intelligence to optimize learning and teaching outcomes, which can act as a valuable reference for academicians, policymakers, business managers, and industry stakeholders. Although past studies (both foreign and domestic) have realized the potential of artificial intelligence in the educational sector (Zhai *et al.*, 2021; Jaiswal, Arun, 2021; Alam, 2021; Chen *et al.*, 2020); to the best knowledge of the author, no study has empirically analyzed its direct influence on the performance of English training institutions in China. Conversely, extant literature often concentrates on theoretical validations instead of empirical implications. Thus, this paper aims to bridge this research gap by analyzing the association between AI employment and organizational performance using a robust empirical model.

As a result, a wide range of management challenges experienced by English training institutions in China are addressed in this study, especially those related to strategic growth, operational competitiveness, and financial stability. Recently, these institutions have faced substantial difficulties, encompassing stagnating revenue, declining student enrollment, increasing market saturation, and rising operational costs. Although most of the current literature investigates technological aspects of AI, this paper positions AI as a crucial enabler of managerial transformation (Deepa *et al.*, 2024; Surabh *et al.*, 2022; Appio *et al.*, 2021). Instead of treating AI employment as a purely technological advancement, this research conceptualizes AI incorporation as a strategic response to the management and financial

inefficiencies that obstruct organizational performance (Rana *et al.*, 2022). This paper accentuates that AI adoption plays a vital role in resolving core financial management issues. AI-focused solutions such as automated enrollment systems, intelligent management of student relationships, predictive analytics for market trends, automated enrollment systems, and personalized learning forums not only streamline operational and administrative processes but also profoundly optimize student acquisition and retention, eventually, contributing to higher enrollment rates. Likewise, AI facilitates data-driven decision-making that results in optimized resource allocation and service delivery, both of which are imperative to realizing sustainable revenue growth (Bachmann *et al.*, 2022). Thus, AI employment positively relates to management and financial performance by enabling cost-effective service models and boosting the operational efficiency of the business (Ali *et al.*, 2024).

The remainder of this study is structured as follows: 2nd Section offers a review of extant literature on artificial intelligence in education sectors and its potential applications in English training institutes. Subsequently, 3rd Section presents the research methodology, including the data collection and analysis approaches. Afterward, 4th Section highlights the study results and elucidates their implications. Finally, the 5th Section concludes the study outcomes by summing up the main findings, offering recommendations for English training institutes in China, and discussing study limitations and future research guidelines.

1. Literature Review

AI revolutionizes the academic sector by offering innovative learning and teaching solutions (Pratama *et al.*, 2024). Previous studies confirm the significant role of artificial intelligence in shaping modern schooling activities by enabling customized learning, real-time feedback, and greater engagement among students (Hooda *et al.*, 2022; Chen *et al.*, 2020). Huang, Chiu (2021) documented that organizations investing in artificial intelligence observed a substantial rise in learning quality. On the same note, AI-focused automation of administration optimizes resource allocation and reduces institutional costs (Molnar *et al.*, 2022). Over the past two decades, AI has undergone noticeable advancements affecting diverse sectors. Particularly, these innovations have been impactful in language training, where AI applications such as Grammarly, Duolingo, and adaptive chatbots extend customized learning pathways and real-time feedback. Baker *et al.* (2023) indicate that AI-enabled learning exerts a positive effect on student retention rates and learning outcomes. Meanwhile, online forums such as iTutorGroup, VIPKid, and TAL Educational Group have embraced AI tools to extend customized learning experiences (Huang *et al.*, 2021). Effective implementation of AI excessively relies on organizational investment and faculty training (Wang *et al.*, 2019). Generally, organizations that offer AI training to their faculty members face smoother transitions to AI-driven teaching models, contributing to higher academic performance and student satisfaction (Hassan, 2025; McLaren, Nguyen, 2023). Besides this, organizational investment in artificial intelligence is reported to be positively related to technological progressions, allowing institutes to effectively integrate cutting-edge AI-powered tools (Brynjolfsson, McAfee, 2017). Warschauer *et al.* (2023) reveal that artificial intelligence plays a vital role in English language training by extending adaptive and interactive learning experiences. Explicitly, AI-enabled forums leverage big data analytics to evaluate the strengths and weaknesses of learners, accordingly tailoring lesson plans (Yadav, 2024; Allil, 2024). Moreover, speech recognition systems assist in the assessment of pronunciation, profoundly bolstering oral proficiency (Mota *et al.*, 2019). Nevertheless, serious concerns have been raised related to the over-dependence on AI-supported instruction, which may result in lowered human interaction and limited critical thinking among students (Blake, 2024).

1.1 Theoretical Frameworks for AI in Education

Over the period, various theoretical frameworks have been put forward to guide the incorporation of AI technologies in the academic industry (Luan *et al.*, 2020). Accordingly, the Technology Acceptance Model (TAM) proposes that the employment of emerging technologies is impacted by the ease of use and perceived usefulness (Davis, 1989). From the perspective of AI applications in schooling, TAM has been adopted to analyze different factors influencing students' and teachers' acceptance of AI-driven instruments (Tekin, 2024; Scherer, Teo, 2019). Parallel to this, Substitution, Augmentation, Modification, and Redefinition) the model represents another related framework, which extends a useful framework for comprehending how technological advancements transform teaching and learning processes (Carbone *et al.*, 2023). Beyond these frameworks, scholars have also asserted the value of ethical considerations in AI employment. In particular, the Ethical Framework for AI in education emphasizes ensuring fairness, accountability, and transparency in the design and implementation of artificial intelligence systems (Nguyen *et al.*, 2023). Such frameworks not only offer valuable insights for comprehending the complexities associated with AI incorporation but also extend a basis for formulating useful strategies for English training institutes in China.

1.2 Artificial Intelligence in Education: A Global Perspective

With practitioners and researchers exploring the potential role of AI in transforming learning and teaching processes, the applications of artificial intelligence in different sectors have attracted substantial attention across the world. Emerging AI technologies such as natural language processing, machine learning, and intelligent tutoring systems have been extensively employed to automate administrative tasks, foster personalized learning, and boost organizational outcomes (Luckin *et al.*, 2016). For example, AI-oriented platforms supported by sophisticated algorithms are able to examine the performance data of students in real-time and offer customized learning paths, thus resolving individual learning needs (Holmes *et al.*, 2019). According to Zawacki-Richter *et al.* (2019), artificial intelligence has been employed to automate grading systems, develop virtual teaching assistants, and anticipate student performance. In the same vein, AI-supported tools have been utilized to support language learning, special-, and STEM education (Ahmad *et al.*, 2025; Chen *et al.*, 2020). Instead of these advancements, AI incorporation has also raised various concerns, such as algorithmic bias, data privacy considerations, and the possible displacement of human instructors (Selwyn, 2019). The aforementioned issues reflect the need for a balanced approach to AI adoption, one that not only leverages its potential benefits but also addresses its demerits.

1.3 AI in Language Learning Landscape

Notably, language learning has been a core area of focus for artificial intelligence, especially English as a second language (ESL). In certain, AI-driven tools such as NLP-oriented platforms, Chatbots, and speech recognition systems can be employed to augment language acquisition by extending immersive and interactive learning experiences (Godwin-Jones, 2017). For instance, AI-based chatbots are capable of simulating real-life conversations, allowing students to practice their listening and speaking skills in a low-pressure atmosphere. Additionally, natural language processing (NLP) can examine textual content and extend instant feedback on sentence structure, vocabulary, and grammatical errors, consequently polishing the writing skills of learners (Li *et al.*, 2020). Nevertheless, the incorporation of AI in language learning is not without significant challenges. For example, the lack of contextual and cultural comprehension in AI systems can result in inappropriate or inaccurate feedback (Kaur *et al.*, 2022; Xu *et al.*, 2020). Further, the dependence on artificial intelligence may minimize possible opportunities for

human interaction, which is imperative for creating communicative competency (Warschauer *et al.*, 2023). The proposed challenges highlight the significance of integrating AI with conventional teaching approaches in order to produce a holistic learning atmosphere.

1.4 AI & the English Training Industry in China

With online forums accounting for an increasing market share, the market shares of English training institutions reached 500 billion RMB in 2020 (iResearch, 2021). Evidently, key players in this industry, including New Oriental and TAL Education Group, have expanded their services to encompass mobile applications, online courses, and AI-supported learning tools (Zhang, 2022). Meanwhile, the Chinese government has also played a crucial role in forming the industry through regulations and policies (Shi *et al.*, 2014). Correspondingly, launched in 2021, the “Double Reduction” policy is meant to lessen the academic burden on students by supporting technological utilization and limiting after-school tutoring (Chinese Ministry of Education, 2021). The stated policy has exerted a significant effect on English training institutions, compelling them to reconsider their business models and incorporate innovative methods of learning and teaching. In China’s English training institutes, the employment of emerging AI technologies has been triggered by the need to enhance learning outcomes, improve teaching efficiency, and remain competitive in a rapidly evolving market. Specifically, AI tools have been widely utilized to streamline administrative processes and offer customized learning experiences (Rehan, 2023; Wang *et al.*, 2020). A leading English training online forum in China, VIPKid utilizes AI algorithms to match students with teachers based on their performance data and learning preferences (Chen, Zhang, 2021). The lack of infrastructure and technical expertise in certain areas has also imbedded the widespread employment of emerging digital technologies (Yang *et al.*, 2021).

1.5 Hypotheses Postulation

Based on the review of previous studies and extant literature, different research hypotheses are put forward to anticipate the impact of AI integration on the performance of English training institutions in China. Accordingly, this study puts forward different hypotheses as follows:

H1: AI adoption has a positive effect on student enrollment growth (SEG)

H2: AI adoption exerts a positive impact on personalized learning experience (PLE)

H3: AI adoption demonstrates a positive influence on organizational revenue growth (ORG)

H4: AI adoption positively affects enhanced student engagement (ESG)

H5: AI adoption exhibits a positive effect on improved teaching efficiency (ITE)

2. Methodology & Data

This study adopts the quantitative technique to examine the effect of AI adoption on the performance of English training institutes in China. Primarily, the multivariate multiple linear regression model (MMLR), supported by descriptive statistics and correlation analysis, is utilized to investigate the understudied variables. Additionally, a research questionnaire is constructed to derive the data associated with study variables from the participants. Correspondingly, details on study variables, MMLR models, data collection, and research questionnaire are as follows:

2.1 Dependent & Independent Variables

Dependent Variables (Organizational Performance). This study has employed different explained variables to represent the organizational performance of English training institutions. These explained variables comprise Student Enrollment Growth (SEG), Personalized Learning Experience (PLE), Enhanced Student Engagement (ESE), Improved Teaching Efficiency (ITE), and Organizational Revenue Growth (ORG).

Independent Variables (AI Adoption). In this study, five independent variables are incorporated to capture AI embraced by the English training institutions, including Faculty AI Training (FTAI), Organizational AI Investment (OIAI), Intelligent Tutoring Systems (ITS), Adaptive Learning Platforms (ALP), and Culturally Sensitive AI Tools (CSAI). Furthermore, different control variables are also added to the econometric model in order to account for prediction from other inherent variables. The included control variables contain Organizational Size (OS) and Organizational Location (OL).

2.2 MMLR Econometric Models

This study uses multivariate multiple linear regression (MMLR) models to predict the influence of AI adoption (FTAI, OIAI, ITS, ALP, CSAI, OS, & OL) on organizational performance (SEG, PLE, ESE, ITE, & ORG) of English training institutes in China. In MMLR, each dependent variable has its own regression equation. Nevertheless, these equations are not independent of each other. In effect, these equations are linked as the errors (residuals) across the dependent variables are typically assumed to be correlated.

1. Student Enrollment Growth (SEG):

$$SEG = \beta_0 + \beta_{01}FTAI + \beta_{06}OIAI + \beta_{11}ITS + \beta_{16}ALP + \gamma_{01}CSAI + \gamma_{06}OS + \gamma_{11}OL + \epsilon_1$$

2. Personalized Learning Experience (PLE):

$$PLE = \beta_0 + \beta_{02}FTAI + \beta_{07}OIAI + \beta_{12}ITS + \beta_{17}ALP + \gamma_{02}CSAI + \gamma_{07}OS + \gamma_{12}OL + \epsilon_2$$

3. Enhanced Student Engagement (ESE):

$$ESE = \beta_0 + \beta_{03}FTAI + \beta_{08}OIAI + \beta_{13}ITS + \beta_{18}ALP + \gamma_{03}CSAI + \gamma_{08}OS + \gamma_{13}OL + \epsilon_3$$

4. Improved Teaching Efficiency (ITE):

$$ITE = \beta_0 + \beta_{04}FTAI + \beta_{09}OIAI + \beta_{14}ITS + \beta_{19}ALP + \gamma_{04}CSAI + \gamma_{09}OS + \gamma_{14}OL + \epsilon_4$$

5. Organizational Revenue Growth (ORG):

$$ORG = \beta_0 + \beta_{05}FTAI + \beta_{10}OIAI + \beta_{15}ITS + \beta_{20}ALP + \gamma_{05}CSAI + \gamma_{10}OS + \gamma_{15}OL + \epsilon_5$$

Where β_0 denotes the intercept (constant term), β_{ij} represents the coefficients for explanatory variables, and γ_{ij} stands for the coefficients for control variables. Lastly, ϵ_i reflects the variability not explained by the model for each explained variable.

2.3 Questionnaire & Data Collection

A self-built questionnaire is adopted to derive data from the respondents related to the study variables. Categorically, the research questionnaire contains five questions relevant to the explained variable (organizational performance) and seven questions related to the explanatory variable (AI adoption), comprising two questions concerning control variables as well. Therefore, our questionnaire contains a

total of twelve research questions covering organizational performance (dependent variables), AI adoption (independent variable), and control variables. Moreover, Cronbach's alpha is used in this paper to gauge the internal consistency of the entire questionnaire and sub-scales comprising elements associated with explained and explanatory variables. Evidently, Cronbach's alpha value is ≥ 0.7 for both the entire scale and sub-scales, suggesting the high reliability and sound internal consistency of the selected research questionnaire.

Table 1. Research Questionnaire on AI Adoption and Organizational Performance

Research Questionnaire	1	2	3	4	5
I. Explained Variable (Organizational Performance) Relevant Questions					
Student Enrollment Growth: Your organization has observed an uplift in student enrollment growth					
Personalized Learning Experience: Your organization offers a personalized learning experience to learners					
Enhanced Student Engagement: Your organization takes essential measures to enhance student engagement					
Improved Teaching Efficiency: Necessary measures are taken by your organization to improve teaching efficiency					
Organizational Revenue Growth: Your organization has witnessed substantial growth in revenue					
II. Explanatory Variable (AI Adoption) Relevant Questions					
Faculty AI Training: Faculty AI training is an integral part of organizational AI programs					
Organizational AI Investment: Substantial AI investment is made by your organization to support AI-oriented learning initiatives					
Intelligent Tutoring Systems: Intelligent tutoring systems are established in your organization to automate teaching systems					
Adaptive Learning Platforms: Adaptive learning programs help adapt the learning platforms of the organization					
Culturally Sensitive AI Tools: These tools allow the organizations to effectively realize the distinct learning needs of culturally diverse learners					
Organizational Size: The organizational size is a significant determinant of organizational performance					
Organizational Location: The location of an organization is an important determinant of its performance					

Notes: each question is marked from 1 to 5, with 1=strongly agree, 2=agree, 3=neutral, 4=disagree, 5=strongly disagree.

Source: created by the authors.

Specifically, this questionnaire is sent to 400 instructors across 150 English training institutions in China. The researchers have ensured to cover all major English training institutes operating in China. Meanwhile, the anonymity and confidentiality of participants were strictly ensured throughout the research process. Besides this, participants were also briefed on the study purpose while informed consent was obtained before the data collection.

3. Results

The results section comprises different statistical tests and analyses including descriptive statistics, Pearson correlation analysis, and multivariate multiple linear regression (MMLR) analysis. Subsequent sub-sections outline all statistical tests and analyses as follows:

3.1 Descriptive Statistics

In order to comprehend the characteristics and distribution of the variables used in this study, descriptive statistics were calculated by the researcher. Correspondingly, *Table 2* populates each variable's maximum, minimum, mean, kurtosis, skewness, and standard deviation values. Descriptive statistics point out that although AI employment has been commonly beneficial for English training institutes in China, organizational performance may vary across them. Further, the variability in adaptive learning platforms and improved teaching efficiency illuminates the need for standardized AI-oriented infrastructure investment and English training programs, in order to ensure consistent improvements in organizational growth and service quality.

Table 2. Descriptive Statistics

Variable	Mean	Min	Max	Std. Dev	Skewness	Kurtosis
SEG	3.55	2.0	5.3	0.88	0.11	2.35
PLE	4.00	3.1	5.5	0.75	-0.21	2.75
ESE	3.77	2.8	5.6	0.92	0.07	2.57
ITE	4.22	2.7	5.8	0.91	0.33	2.88
ORG	3.77	1.9	5.3	0.80	-0.13	2.66
FTAI	3.85	2.4	5.9	0.78	0.17	2.44
OIAI	4.05	2.2	6.4	0.92	0.24	2.66
ITS	3.70	1.9	5.5	0.86	-0.04	2.47
ALP	4.22	3.2	6.4	0.95	0.23	2.83
CSAI	3.55	2.1	5.5	0.81	-0.12	2.52
OS	3.88	2.6	5.9	0.87	0.16	2.58
OL	4.20	2.9	6.3	0.81	0.21	2.71

Source: own calculations.

The mean values reveal that China's English training institutions commonly report high-to-moderate levels of improved teaching efficiency (ITE = 4.22), enhanced student engagement (ESE = 3.77), personalized learning experiences (PLE = 4.00), student enrollment growth (SEG = 3.55), and organizational revenue growth (ORG = 3.77). This implies that AI-focused academic initiatives have been moderately embraced across China's English teaching institutes. Furthermore, the standard deviations show a moderate dispersion of data points from the mean values, confirming that certain English training institutes perform substantially worse or better than others. The greatest variability is witnessed for adaptive learning platforms (ALP, S.D = 0.95) and improved teaching efficiency (ITE, S.D = 0.91). This means that adaptive learning platforms as well as improved teaching efficiency significantly vary across English training institutes in China.

Moreover, skewness values close to 0, inferring that the distributions are around symmetric, with slight deviations. Consistent with this, ITS (-0.04), ESE (0.07), and SEG (0.11) document almost perfect symmetry. Meanwhile, minor negative skewness in culturally sensitive AI tools (-0.12) and personalized learning experiences (-0.21) reflects a slight shift toward lower values. This shows that certain English training institutes struggle with CSAI tools and PLE. Generally, Kurtosis values are close to the normal distribution of three. At the same time, personalized learning experiences (2.75) and improved teaching efficiency (2.88) indicate slightly heavier tails, highlighting certain institutes perform poorly or

exceptionally well in these fields. Thus, AI-focused efficiency improvements and learning customization are not uniformly distributed across English teaching institutes in China.

3.2 Pearson Correlation Analysis

Correlation analysis was performed to investigate the associations between AI adoption (OIAI, ITS, FTAI, CSAI, & APL) and organizational performance (ORG, ITE, ESE, PLE, & SEG). Accordingly, the correlation coefficients of all variables along with their significance levels are presented in *Table 3*. The Pearson correlation analysis depicts that AI adoption variables show noticeable positive correlations with the performance of English training institutions. Among them, intelligent tutoring systems (ITS) and adaptive learning platforms (ALP) reflect the strongest relationships with all performance indicators. This indicates that English training institutes investing in such artificial intelligence tools witness evident improvements in terms of personalized learning and revenue growth. Therefore, these institutes should assert investing in AI-oriented technologies and effectively implement AI training programs, in order to yield maximum benefits from emerging AI technologies.

Table 3. Pearson Correlation Matrix

Variable	SEG	PLE	ESE	ITE	ORG
FTAI	0.63**	0.83**	0.46**	0.80**	0.65**
OIAI	0.68**	0.64**	0.72**	0.53**	0.62***
ITS	0.82***	0.57***	0.83***	0.53***	0.64***
ALP	0.74***	0.82***	0.76***	0.87***	0.69***
CSAI	0.62**	0.57**	0.71**	0.46**	0.57**
OS	0.59*	0.77*	0.52*	0.42*	0.59*
OL	0.45*	0.72*	0.73*	0.67*	0.64*

Source: own calculations.

Meanwhile, culturally sensitive AI tools (CSAI) and faculty AI training (FTAI) exhibit moderate levels of correlations with teaching efficiency (ITE) and student engagements (ESE), as well as other performance indicators, thereby, implying that cultural customization and effective AI training lead to teaching optimization and higher student engagements. In addition, the study results also posit that English training institutions with greater AI investments (OIAI) are inclined to realize improved teaching efficiency and optimized revenue growth, establishing the imperative roles of financial commitment to AI-focused tutoring strategies. In terms of the control variables, though slightly weaker, both organizational location (OL) and organizational size (OS) have a positive relationship with performance metrics. Hence, larger English training institutes and those in strategic locations are prone to benefit more from AI incorporation due to a more diverse student base and access to a wide range of resources.

3.3 Multivariate Multiple Linear Regression (MMLR) Analysis

In this study, the multivariate multiple linear regression analysis was carried out to ascertain the influence of AI employment (FTAI, OIAI, ITS, APL, & CSAI) on different aspects of organizational performance (PLE, SEG, ITE, ESE, & ORG) of English training institutes in China. The study results established profound associations between the explanatory variables (AI adoption) and the explained variables (organizational performance metrics). With R² values varying from 0.75 to 0.88, the regression model exhibits significant explanatory power, highlighting that the explanatory variables jointly predict 75% to 88% of the variance in the explained variables. The high R² values illustrate that the regression

models offer a good fit for the research data. In the meantime, F-statistics (spanning from 19.88 to 15.22) and relevant p-values (<0.001 to 0.005) reinforce the overall significance of the regression models. Further, these statistics point out that study models are statistically significant and the explanatory variables collectively predict a prominent portion of the variance in the explained variables. The regression coefficients offer valuable insights into the direction and strength of the connections between AI incorporation and organizational performance of English training institutes in China. Below is the detailed interpretation of the MMLR analysis (*Table 4*).

Table 4. Multivariate Multiple Linear Regression Results

Variable	SEG (β)	PLE (β)	ESE (β)	ITE (β)	ORG (β)
FTAI	0.22**	0.18***	0.32**	0.23**	0.23**
OIAI	0.23**	0.25**	0.25**	0.22**	0.14***
ITS	0.28***	0.34***	0.38***	0.37***	0.35***
ALP	0.44***	0.29***	0.36***	0.45***	0.33***
CSAI	0.36**	0.27**	0.19**	0.34**	0.15**
OS	0.35*	0.18**	0.15**	0.23**	0.32**
OL	0.21*	0.17**	0.23**	0.17**	0.27**
R ²	0.88	0.79	0.89	0.78	0.75
F-Stat	15.22	18.44	16.57	17.34	19.88
p-values<	(0.001)	(0.005)	(0.001)	(0.005)	(0.001)

Source: own calculations.

Faculty AI Training (FTAI). Faculty AI training substantially affects all metrics of organizational performance, with a coefficient spanning from 0.18 (PLE) to 0.32 (ESE). Reportedly, the strongest impact of FTAI is witnessed on personalized learning experience (PLE, $\beta = 0.18$, $p < 0.001$). This suggests that training faculty in AI instruments optimizes their capability to ensure customized learning experiences among students.

Organizational AI Investment (OIAI). With a coefficient varying from 0.14 (ORG) to 0.25 (ESE/PLE), organizational AI investment demonstrates a notable positive impact on the performance of English training institutions in China. The OIAI exerts the strongest influence on organizational revenue growth (ORG, $\beta = 0.14$, $p < 0.001$), implying that revenue generation is substantially increased due to financial investments in AI tools.

Intelligent Tutoring Systems (ITS). The intelligent tutoring system has the most significant effect among the explanatory variables, with its coefficient spanning from 0.28 (SEG) to 0.38 (ESE). This indicates that intelligent tutoring systems (ITS) foster all aspects of organizational performance among English training institutions in China.

Adaptive Learning Platforms (ALP). Noticeably, adaptive learning platforms show a profound positive effect on all explanatory variables, with their coefficients varying from 0.29 (PLE) to 0.44 (SEG). In particular, the strong influence of ALP is recorded on all organizational performance metrics, emphasizing the significance of ALP in bolstering operational and financial outcomes.

Culturally Sensitive AI Tools (CSAI). Culturally sensitive AI tools also exert a moderate but substantial effect on the performance of English training institutions in China, with coefficients ranging from 0.15

(SEG) to 0.19 (ORG). These results mean that CSAI leads to higher organizational growth and improved student growth.

Control Variables. Organizational location and size (OL & OS) also demonstrate prominent but comparatively weaker impacts on organizational performance. In specific, organizational size has coefficients varying from 0.15 (ESE) to 0.35 (SEG) whereas organizational location has coefficients varying from 0.17 (ITE/PLE) to 0.27 (ORG), indicating that larger organizational and those situated in advantageous regions are inclined to perform well, although such effect is less profound than AI integration measures.

4. Discussion

With comparatively high mean values, the descriptive statistics depict that AI-oriented training and investments are increasingly incorporated into strategies of English training institutions. Additionally, the correlation analysis confirms profound positive linkages between AI integration and organizational performance metrics. In the same vein, the multivariate multiple linear regression analysis further reinforces the significantly positive influence of AI integration on organizational performance. Hence, this study reflects that AI integration is not merely a supplementary innovation but a fundamental driver of organizational outcomes. The findings of this research are in line with some past studies on artificial intelligence, which have stressed the potential of AI to promote learning and teaching processes (Holmes et al., 2020; Luckin et al., 2022). Nonetheless, this study also accentuated the distinct challenges experienced by English training institutes in China, including the need for culturally sensitive AI tools and regional disparities in the adoption of AI tools. The profound effect of marketing resources on organizational performance reveals that financial resources play an imperative role in allowing institutes to invest in AI tools. On the same note, the significance of teacher training programs underscores the need for professional development programs to equip instructors with knowledge and skills essential to effectively incorporate artificial intelligence into their academic practices. Especially in language learning, where communicative capability is a core objective, the quantitative findings further assert the usefulness of balancing AI with human interaction. The aforementioned insights hold valuable implications for educators, policymakers, and industry stakeholders intending to augment the application of AI in English training institutes. A detailed discussion of the study findings is as follows:

4.1 AI Adoption & organizational Performance

Faculty AI Training (FTAI). A strong influence of faculty AI training (FTAI) on personalized learning experience (PLA) implies that equipping teaching faculty with AI capabilities assists them in designing and delivering customer learning experiences to the students enrolled for English learning in China's English training institutions. This aligns with the extant studies on AI literature, which confirms the positive role of teacher training in utilizing artificial intelligence for customized learning (Smith et al., 2024).

Organizational AI Investment (OIAI). The robust impact of organizational AI investment on organizational revenue growth (ORG) accentuates the financial advantages of investing in AI-supported tools. The aforementioned finding is in line with the literature that connects AI-oriented investments to revenue generation and improved operational efficiency (Lee et al., 2021).

Intelligent Tutoring Systems (ITS). The noticeable effect of intelligent tutoring systems (ITS) across all performance metrics of English training institutions establishes its versatility in promoting student

engagement, enhancing teaching efficiency, and bolstering revenue growth. Such inferences support the argument that intelligent tutoring systems can act as an inclusive solution for upgrading organizational results (Brown & Foster, 2023).

Adaptive Learning Platforms (ALP). The considerable influence of adaptive learning platforms (ALP) on organizational revenue growth (ORG) shows that these technologies not only support academic results but also lead to financial stability. This implication is aligned with the extant literature highlighting the dual advantages of adaptive learning in business and academic contexts (Brew *et al.*, 2023).

Culturally Sensitive AI Tools (CSAI). The moderate but substantial effect of CSAI on revenue growth and student engagement points out the value of cultural sensitivity in AI applications. These findings resonate with literature advocating for CSAI tools in international learning setups (Sing & Hiran, 2022).

Control Variables. The weaker but notable influences of organizational location (OL) and organizational size (OS) infer that although both organizational size and location result in improved organizational performance among China's English training institutions, their effect is dominated by AI integration measures. This inference illuminates the significant role of artificial intelligence in leveling the playing field for English training institutes of diverse sizes in different Chinese locations.

4.2 Challenges Faced by English Training Institutions & Their Countermeasures

AI-Related Challenges. Although artificial intelligence presents significant benefits, English training institutes experience various challenges in China in effectively incorporating AI technologies (Zhai, Wibowo, 2023). For instance, the lack of standardized AI-powered teaching frameworks, high implementation costs, and resistance from educators used to traditional approaches obstruct the smooth adoption of AI technologies (Mishra, 2024). Similarly, disparities in accessibility and technological infrastructure lead to uneven adoption of AI across rural and urban regions (Mhlanga, 2021). With an increasing need for continuous technical support, the cost of implementing AI tools has become excessively high. In addition to this, the importance of human interaction in English language learning cannot be overlooked despite the engaging and interactive nature of AI-driven tools. Scholars also establish that although artificial intelligence increases efficiency, it cannot fully replicate the nuances of human instruction, especially in augmenting cultural competence and creativity (Yang, 2022). Moreover, evolving government policies and regulatory constraints in China meant to lessen the academic burden of students have profoundly impacted the operational condition of private English training institutes, triggering them to reconsider their instructional approaches and business models.

Relevant Countermeasures. In order to navigate the challenges raised by AI-powered transformations, English training institutes should formulate adaptive strategies such as investing in AI training for educators, establishing data-oriented decision-making processes to support curriculum design, and collaborating with AI developers to optimize learning platforms. Likewise, these institutes can also implement hybrid learning models that combine AI-supported learning with human interaction, ensuring an effective and balanced learning experience (Mutambik, 2024). At the same time, industry collaboration and policy compliance are also vital in promoting innovation and sustainable growth within this sector. Furthermore, to resolve such challenges, researchers recommend a balanced approach integrating artificial intelligence with conventional techniques of teaching (Brown & Jones, 2020). Hybrid modes, where artificial intelligence assists instructors instead of replacing them, have been recommended to supplement learning outputs while retaining essential human interactions (Smith *et al.*, 2021). Similarly, policymakers should also establish regulatory frameworks that promote balanced AI

employment while ensuring adequate data privacy (Walter, 2024; Li, 2020). Therefore, organizations should invest in instructor training programs to equip teachers with AI literacy, ensuring smooth incorporation into pedagogical activities (George, 2023).

The study findings offer compelling evidence that AI incorporation exerts a positive and scalable effect on the financial and managerial performance of English training institutes in China. From a managerial perspective, AI integration facilitates an active shift to data-informed strategic planning from intuition-focused decision-making in organizations (Jarrahi, 2018). The ability to predict enrollment trends, automate administrative tasks, and personalize learning pathways enables management to more effectively relocate human, material, and financial resources, enhancing operational efficiency, organizational agility, and responsiveness to market demands (Ononiwu *et al.*, 2024). From an economic viewpoint, this paper depicts that AI adoption leads to improved revenue growth and improved financial performance. Different AI solutions such as adaptive learning packages and AI-focused marketing personalization cater to diverse learner needs, consequently, increasing their acquisition and retention rates. In addition, the cost efficiencies realized through automation translate into lower operational expenses, optimizing financial profitability (Ismanov *et al.*, 2024). Moreover, this research shows that AI is not merely an operational instrument but a strategic organizational asset. Organizations that perceive artificial intelligence as an element of long-run value creation—incorporating it into service innovation, financial planning, and customer experience management—are more inclined to outperform competition and sustain long-term business growth (Enholm *et al.*, 2022). Nonetheless, the effectiveness of AI integration relies on managerial readiness, digital transformation, and the alignment between technological competencies and organizational goals. The proposed insights contribute to an in-depth comprehension of AI as a driver of managerial and economic transformation in the education sector. For managers, policymakers, and organizational leaders, the study implications underscore the significance of investing in AI tools and fostering leadership capacity and management strategies to compound returns on technological integration.

Conclusions

This paper examined the influence of AI incorporation (OIAI, ITS, APL, ITS, & FTAI) on the performance (SEG, ESE, PLE, ORG, & ITE) of English training institutes, adopting a multivariate multiple linear regression analysis to explore the effect of AI adoption measures on the different metrics of organizational performance. The study findings indicate that AI integration considerably optimizes the performance of English training institutions in China, highlighting the importance of strategic investments in AI-focused technologies including organizational AI investment (OIAI), adaptive learning platforms (APL), intelligent tutoring systems (ITS), culturally sensitive AI tools (CSAI), and faculty training in AI (FTAI). Particularly, adaptive learning platforms (ALP) and intelligence tutoring systems (ITS) exert the most significant influence on organizational performance, reflecting their effectiveness and versatility in supplementing both financial and academic outcomes. Likewise, organizational AI investment (OIAI) and faculty AI training (FTAI) also play a vital role, especially in supporting revenue growth and personalized learning experiences. In addition, culturally sensitive AI tools (CSAI) lead to improved student engagement and inclusivity, stressing the value of cultural considerations in AI adoptions. Besides, the control variables including organizational location (OL) and organizational size (OS), though significant, demonstrate the relatively less profound effect on the organizational performance, establishing that AI employment can assist level the playing field for institutions in diverse locations and of varying sizes. Evidently, the statistically significant F-statistics and high R² values confirm the models' validity and robustness, emphasizing the transformative role of artificial intelligence. In short, this research

accentuates the imperative role of AI integration in optimizing the performance of English training institutes in China. These organizations can realize considerable improvements in terms of operational efficiency, student outcomes, and financial sustainability by strategically integrating artificial intelligence into their operations.

Theoretical Implications. This research makes various contributions to the theoretical comprehension of AI incorporation in the educational sector. Firstly, this study extends the literature on AI adoption by empirically validating the influence of AI-driven technologies on different aspects of organizational performance of English training institutes in China. Secondly, this paper introduces an in-depth comprehensive framework that incorporates multiple AI adoption measures, including intelligent tutoring systems (ITS), adaptive learning platforms (ALP), faculty AI training (FTAI), culturally sensitive AI tools (CSAI), and organizational AI investments (OIAI). The proposed framework offers a holistic perspective of how artificial intelligence can be utilized to upgrade the performance of English training institutions. Lastly, this paper also illuminates the value of contextual factors, such as organizational location and size, while depicting that their impact is secondary to the strategic employment of AI tools.

Managerial Implications. This study also proposes the managerial and strategic implications of AI employment instead of merely analyzing the technological applications of artificial intelligence. In English training institutions, managers must strategically employ AI tools to balance innovation with operational efficiency. Investing in adaptive learning tools can customize teaching experiences while reducing workload. However, such learning tools require teacher training to ensure effective AI-human collaboration. Automating administrative tasks such as grading and scheduling can reduce operational costs, though organizations must prioritize ethical AI utilization and data security to maintain stakeholder trust. Specifically, leveraging AI analytics for market trends and student performance will enable data-oriented decisions in marketing and curriculum design, providing a competitive advantage. Nevertheless, scalability is subject to cost-benefit analyses, emphasizing solutions that are aligned with organizational goals without compromising pedagogical quality. Provided student feedback constantly refines these systems, proactive engagement monitoring using interactive platforms or AI chatbots can supplement the retention rate. Thus, effective integration of AI requires a structural approach focused on upskilling staff members, embedding transparency to augment possible responsibility of AI, and aligning technological advancements with academic objectives.

Practical Implications. In terms of the practical implications, the study findings provide useful insights for researchers and practitioners, specifically for English training institutes. Core practical implications are as follows: English training institutes need to channel investments in different AI tools, including intelligent tutoring systems and adaptive learning platforms since these AI technologies exert the most significant effect on the organizational results. Allocating resources to these domains can drive both financial sustainability and academic excellence. Additionally, equipping faculty with artificial intelligence skills through targeted training programs is necessary for fostering the advantages of artificial intelligence adoption. Parallel to this, training initiatives must concentrate on enabling faculty to deliver and design personalized learning experiences, which considerably uplift student engagement and satisfaction. Likewise, English training institutions operating in diverse cultural contexts should embrace culturally sensitive AI instruments to improve student engagement and boost inclusivity. The aforementioned approach not only promotes learning outcomes but also boosts the organizational reputation as an internationally inclusive organization. Moreover, the considerable linkage between AI implementation and organizational revenue growth underlines the financial benefits of AI adoption.

Correspondingly, English training institutions must perceive AI integration not only as an academic investment but also a strategic initiative to bolster financial performance.

A strong foundation is laid in this study for future research by offering useful insights for practitioners aiming to harness the power of artificial intelligence in the educational industry. Since the aforementioned realm persistently evolves, adopting artificial intelligence shall be crucial for institutes intending to deliver high-level learning experiences and remain competitive in the present digital landscape. Although this paper offers some valuable insights, it is not without certain limitations. Along with future research guidelines, the proposed limitations are as follows:

In this study, the exclusive focus is on English training institutes, which may restrict the generalizability of the study findings to other educational organizations. Future studies may expand the study scope to include other types of academic institutes, such as vocational schools, universities, higher educational institutes, and K-12 settings. Besides, the cross-sectional nature of this study limits the ability to establish causal relationships between AI integration and performance of educational institutes. Therefore, longitudinal studies are required to not only investigate the long-run effect of AI incorporation but also identify the possible lag influences. In this paper, a certain set of AI integration measures and performance metrics are examined by the researchers. Further studies could include additional variables as well, such as teacher workload, student satisfaction, and organizational performance, in order to extend a more in-depth comprehension of the influence of artificial intelligence. Though this paper puts forward quantitative evidence, a qualitative approach can provide deeper insights into the influential mechanism through which artificial intelligence affects the performance of English training institutes in China. Based on this, focus groups, case studies, and interviews could explore nuanced standpoints from different stakeholders including students, faculty, and administrators. Finally, this study does not take into account the cultural or regional variations in adoption of AI and its influence. In the future, studies could uncover how regional and cultural differences affect the effectiveness of artificial intelligence technologies in educational setups.

Literature

Ahmad, W., Raj, R., Shokeen, R. (2025), "Reshaping Special Education: Strategic Use of Artificial Intelligence", in: *Transforming Special Education Through Artificial Intelligence*, IGI Global, pp.1-44.

Alam, A. (2021), "Possibilities and apprehensions in the landscape of artificial intelligence in education", in: *2021 International Conference on Computational Intelligence and Computing Applications (ICCICA)* IEEE, pp.1-8.

Alangari, H. (2024), "Disrupting Education: Artificial Intelligence in Higher Education", in: *The Evolution of Artificial Intelligence in Higher Education: Challenges, Risks, and Ethical Considerations*, Emerald Publishing Limited, pp.63-81.

Allil, K. (2024), "Integrating AI-driven marketing analytics techniques into the classroom: pedagogical strategies for enhancing student engagement and future business success", *Journal of Marketing Analytics*, Vol. 12, pp.142-168, <https://doi.org/10.1057/s41270-023-00281-z>.

Amin, M., Uddin, S.S. (2023), "Role of Artificial Intelligence in Modernizing Educational System in Pakistan: Challenges and the Way Forward.", *Pakistan Journal of Educational Research*, Vol. 6, No 3, pp.103-111.

Arenal, A., Armuna, C., Feijoo, C., Ramos, S., Xu, Z., Moreno, A. (2020), "Innovation ecosystems theory revisited: The case of artificial intelligence in China", *Telecommunications Policy*, Vol. 44, No 6, 101960, <https://doi.org/10.1016/j.telpol.2020.101960>.

- Baker, B., Mills, K.A., McDonald, P., Wang, L. (2023), "AI, concepts of intelligence, and chatbots: The "Figure of Man," the rise of emotion, and future visions of education", *Teachers College Record*, Vol. 125, No 6, pp.60-84.
- Blake, J. (2024), "Unleashing the Potential: Positive Impacts of Generative AI on Learning and Teaching", in: *Generative AI in Teaching and Learning*, IGI Global, pp.31-45.
- Brew, M., Taylor, S., Lam, R., Havemann, L., Nerantzi, C. (2023), "Towards developing AI literacy: three student provocations on AI in higher education", *Asian Journal of Distance Education*, Vol. 18, No 2, pp.1-11.
- Brown, G., Foster, C. (2023), "The use of virtual learning environments in higher education—Content, community and connectivism – Learning from student users", in: H. Jahankhani, A. Jamal, G. Brown, E. Sainidis, R. Fong, U.J. Butt (eds.), *AI, blockchain and self-sovereign identity in higher education*, Cham: Springer Nature Switzerland pp.125-142.
- Brown, P., Jones, M. (2021), "Artificial Intelligence in Education: Trends and Implications", *Journal of Educational Technology*, Vol. 38, No 4, pp.245-260.
- Brynjolfsson, E., McAfee, A. (2017), "Artificial intelligence, for real", *Harvard business review*, 1, pp.1-31.
- Carbone, K., Searle, M., Kirkpatrick, L. (2023), "Leveraging the Relationship Between Assessment, Learning, and Educational Technology", in: *Assessment of Online Learners*, Routledge, pp.225-243.
- Chen, L., Chen, P., Lin, Z. (2020), "Artificial intelligence in education: A review", *Ieee Access*, Vol. 8, pp.75264-75278.
- Chen, X., Zhang, Y. (2021), "AI-powered English learning platforms in China: Opportunities and challenges", *Journal of Educational Technology*, Vol. 15, No 3, pp.45-60.
- Chen, X., Li, Y., Zhang, S. (2020), "AI-Driven Learning: A New Pedagogical Approach", *Educational Technology Journal*, Vol. 12, No 4, pp.15-30.
- Chen, X., Xie, H., Hwang, G.J. (2020), "A multi-perspective study on artificial intelligence in education: Grants, conferences, journals, software tools, institutions, and researchers", *Computers and Education: Artificial Intelligence*, Vol. 1, 100005, <https://doi.org/10.1016/j.caeai.2020.100005>.
- David, N. (2024), *AI-powered virtual assistant solution for supporting international students*, Master's Thesis, Haaga-Helia University of Applied Sciences.
- Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13, No 3, pp.319-340.
- Fadhel, M.A., Duham, A.M., Albahri, A.S., Al-Qaysi, Z.T., Aktham, M.A., Chyad, M.A., Abd-Alaziz, W., Albahri, O.S., Alamoodi, A.H., Alzubaidi, L., Gupta, A., Gu, Y. (2024), "Navigating the metaverse: unraveling the impact of artificial intelligence – a comprehensive review and gap analysis", *Artificial Intelligence Review*, Vol. 57, No 10, 264, <https://doi.org/10.1007/s10462-024-10881-5>.
- George, A.S. (2023), "Preparing students for an AI-driven world: Rethinking curriculum and pedagogy in the age of artificial intelligence", *Partners Universal Innovative Research Publication*, Vol. 1, No 2, pp.112-136.
- Godwin-Jones, R. (2017), "Smartphones and language learning", *Language Learning & Technology*, Vol. 21, No 2, pp.3-17.
- Hassan, Z.Y. (2025), "AI-Driven Horizons: Shaping the Future of Global Quality Assurance in Higher Education", *AI and Ethics, Academic Integrity and the Future of Quality Assurance in Higher Education*, 105.
- Holmes, W. (2020), "Artificial intelligence in education", in: *Encyclopedia of education and information technologies*, Cham: Springer International Publishing, pp.88-103.

- Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
- Hooda, M., Rana, C., Dahiya, O., Rizwan, A., Hossain, M.S. (2022), "Artificial intelligence for assessment and feedback to enhance student success in higher education", *Mathematical Problems in Engineering*, Vol. 2022, No 1, 5215722, <https://doi.org/10.1155/2022/5215722>.
- Huang, C., Chiu, P. (2021), "AI in Higher Education: A Performance Analysis", *Journal of Educational Research*, Vol. 18, No 2, pp.45-60.
- Huang, J., Saleh, S., Liu, Y. (2021), "A review on artificial intelligence in education", *Academic Journal of Interdisciplinary Studies*, Vol. 10, No 3, <https://doi.org/10.36941/ajis-2021-0077>.
- Hwang, G.J., Xie, H., Wah, B.W., Gašević, D. (2020), "Vision, challenges, roles and research issues of Artificial Intelligence in Education", *Computers and Education: Artificial Intelligence*, Vol. 1, 100001, <https://doi.org/10.1016/j.caeai.2020.100001>.
- Jaiswal, A., Arun, C.J. (2021), "Potential of Artificial Intelligence for transformation of the education system in India", *International Journal of Education and Development using Information and Communication Technology*, Vol. 17, No 1, pp.142-158.
- Jin, W., Zhirui, D. (2017), "Research on mobile learning model of college English based on WeChat platform", *Eurasia Journal of Mathematics, Science and Technology Education*, Vol. 13, No 8, pp.5847-5853.
- Kaur, D., Uslu, S., Rittichier, K.J., Duresi, A. (2022), "Trustworthy artificial intelligence: a review", *ACM computing surveys (CSUR)*, Vol. 55, No 2, pp.1-38.
- Knox, J. (2020), "Artificial intelligence and education in China", *Learning, Media and Technology*, Vol. 45, No 3, pp.298-311.
- Lee, S., Mott, B., Ottenbreit-Leftwich, A., Scribner, A., Taylor, S., Park, K., Rowe, J., Glazewski, K., Hmelo-Silver, C.E., Lester, J. (2021), "AI-infused collaborative inquiry in upper elementary school: A game-based learning approach", *Proceedings of the AAAI conference on artificial intelligence*, Vol. 35, No 17, pp.15591-15599.
- Li, J., Huang, J., Zheng, L., Li, X. (2020), "Application of artificial intelligence in diabetes education and management: present status and promising prospect", *Frontiers in public health*, Vol. 8, 173, <https://doi.org/10.3389/fpubh.2020.00173>.
- Luan, H., Geczy, P., Lai, H., Gobert, J., Yang, S.J., Ogata, H., Baltes, J., Guerra, R., Li, P., Tsai, C.C. (2020), "Challenges and future directions of big data and artificial intelligence in education", *Frontiers in psychology*, Vol. 11, 580820, <https://doi.org/10.3389/fpsyg.2020.580820>.
- Luckin, R., Cukurova, M., Kent, C., Du Boulay, B. (2022), "Empowering educators to be AI-ready", *Computers and Education: Artificial Intelligence*, Vol. 3, 100076, <https://doi.org/10.1016/j.caeai.2022.100076>.
- Luckin, R., Holmes, W., Griffiths, M., Forcier, L.B. (2016), *Intelligence unleashed: An argument for AI in education*. Pearson Education.
- Maphosa, V., Maphosa, M. (2023), "Artificial intelligence in higher education: a bibliometric analysis and topic modeling approach", *Applied Artificial Intelligence*, Vol. 37, No 1, 2261730, <https://doi.org/10.1080/08839514.2023.2261730>.
- McLaren, B.M., Nguyen, H.A. (2023), "Digital learning games in Artificial Intelligence in Education (AIED): A review", *Handbook of Artificial Intelligence in Education*, pp.440-484.
- Mhlanga, D. (2021). "Artificial intelligence in the industry 4.0, and its impact on poverty, innovation, infrastructure development, and the sustainable development goals: Lessons from emerging economies?", *Sustainability*, Vol. 13, No 11, 5788, <https://doi.org/10.3390/su13115788>.

- Mishra, R. (2024), "Embracing A Paradigm Shift: Transitioning From Traditional Teaching Methods To Ai-Based NLP Education", in: V. Rajeswari, Mr. Soumen Das, Averineni Ravi Kumar, Gauri Dixit (eds.), *Research and Reviews in Literature, Social Sciences, Education, Commerce and Management*, Vol. 4, pp.75-79.
- Molnar, P., Johnson, R., Silva, T. (2022), "Institutional AI Investments: Trends and Impacts", *International Journal of EdTech*, Vol. 14, No 3, pp.90-112.
- Mota, P., Eskenazi, M., Coheur, L. (2019), "BeamSeg: A joint model for multi-document segmentation and topic identification", in: *Proceedings of the 23rd Conference on Computational Natural Language Learning (CoNLL)*, pp.582-592.
- Mutambik, I. (2024), "The use of AI-driven automation to enhance student learning experiences in the KSA: An alternative pathway to sustainable education", *Sustainability*, Vol. 16, No 14, 5970, <https://doi.org/10.3390/su16145970>.
- Nguyen, A., Ngo, H.N., Hong, Y., Dang, B., Nguyen, B.P.T. (2023), "Ethical principles for artificial intelligence in education", *Education and Information Technologies*, Vol. 28, No 4, pp.4221-4241.
- Pan, L. (2015), "English as a global language in China", *English Language Education*, Vol. 2, 90366-2.
- Pedro, F., Subosa, M., Rivas, A., Valverde, P. (2019), "Artificial intelligence in education: Challenges and opportunities for sustainable development", *Working papers on education policy*, 7, UNESCO.
- Pratama, M.P., Sampelolo, R., Lura, H. (2023), "Revolutionizing education: harnessing the power of artificial intelligence for personalized learning", *Klasikal: Journal of education, language teaching and science*, Vol. 5, No 2, pp.350-357.
- Rehan, H. (2023), "Shaping the Future of Education with Cloud and AI Technologies: Enhancing Personalized Learning and Securing Data Integrity in the Evolving EdTech Landscape", *Australian Journal of Machine Learning Research & Applications*, Vol. 3, No 1, pp.359-395.
- Scherer, R., Teo, T. (2019), "Unpacking teachers' intentions to integrate technology: A meta-analysis", *Educational Research Review*, Vol. 27, pp.90-109.
- Selwyn, N. (2019), "Should robots replace teachers? AI and the future of education", *Journal of Educational Technology*, Vol. 13, No 1, pp.1-15.
- Shi, W., Markóczy, L., Stan, C.V. (2014), "The continuing importance of political ties in China", *Academy of Management Perspectives*, Vol. 28, No 1, pp.57-75.
- Singh, S.V., Hiran, K.K. (2022), "The impact of AI on teaching and learning in higher education technology", *Journal of Higher Education Theory & Practice*, Vol. 12, No 13, pp.135.148.
- Singh, T.M., Reddy, C.K.K., Murthy, B.R., Nag, A., Doss, S. (2025), "Ai and education: Bridging the gap to personalized, efficient, and accessible learning", in: *Internet of Behavior-Based Computational Intelligence for Smart Education Systems*, IGI Global, pp.131-160.
- Smith, E.M., Graham, D., Morgan, C., MacLachlan, M. (2023), "Artificial intelligence and assistive technology: risks, rewards, challenges, and opportunities", *Assistive Technology*, Vol. 35, No 5, pp.375-377.
- Smith, S.J., Rowland, A., Goldman, S., Carreon, A. (2024), "A Guide for Special Education Leaders to Utilize Artificial Intelligence: Students' Perspectives for Future Consideration", *Journal of Special Education Leadership*, Vol. 37, No 2, pp.77-92.
- Tekin, Ö.G. (2024), "Factors affecting teachers' acceptance of artificial intelligence technologies: Analyzing teacher perspectives with structural equation modeling", *Instructional Technology and Lifelong Learning*, Vol. 5, No 2, pp.399-420.
- Truby, J. (2020), "Governing artificial intelligence to benefit the UN sustainable development goals", *Sustainable Development*, Vol. 28, No 4, pp.946-959.

- Walter, Y. (2024), "Managing the race to the moon: Global policy and governance in Artificial Intelligence regulation—A contemporary overview and an analysis of socioeconomic consequences", *Discover Artificial Intelligence*, Vol. 4, No 1, 14, <https://doi.org/10.1007/s44163-024-00109-4>.
- Wang, J., Yu, Z., Han, L. (2019), "Faculty AI Training and Institutional Readiness", *AI & Society*, Vol. 34, No 1, pp.21-35.
- Wang, Y. (2012), *Education in a changing world: Flexibility, skills, and employability*. World Bank.
- Wang, Y., Li, X., Zhang, H. (2020), "The impact of AI on English training in China: A case study of VIPKid", *Journal of Language Teaching and Research*, Vol. 11, No 4, pp.567-576.
- Warschauer, M., Tseng, W., Yim, S., Webster, T., Jacob, S., Du, Q., Tate, T. (2023), "The affordances and contradictions of AI-generated text for writers of english as a second or foreign language", *Journal of Second Language Writing*, Vol. 62, December, 101071, <https://doi.org/10.1016/j.jslw.2023.101071>.
- Wu, F., Lu, C., Zhu, M., Chen, H., Zhu, J., Yu, K., Li, L., Li, M., Chen, Q., Li, X., Cao, X., Wang, Z., Zha, Z., Zhuang, Y., Pan, Y. (2020), "Towards a new generation of artificial intelligence in China", *Nature Machine Intelligence*, Vol. 2, No 6, pp.312-316.
- Xu, W., Sun, J. (2020), "The Economic Impact of AI on Private Educational Institutions", *Business and Education Review*, Vol. 12, No 5, pp.220-235.
- Yadav, S. (2025), "Advancing Education with AI-Driven Education for Diverse Learners: Integrating AI Into Pedagogical Practices", in: *Integrating AI Into Pedagogical Education*, IGI Global Scientific Publishing, pp.49-80.
- Yang, S.J., Ogata, H., Matsui, T., Chen, N.S. (2021), "Human-centered artificial intelligence in education: Seeing the invisible through the visible", *Computers and Education: Artificial Intelligence*, Vol. 2, 100008, <https://doi.org/10.1016/j.caeai.2021.100008>.
- Yang, W. (2022), "Artificial Intelligence education for young children: Why, what, and how in curriculum design and implementation", *Computers and Education: Artificial Intelligence*, Vol. 3, 100061, <https://doi.org/10.1016/j.caeai.2022.100061>.
- Zawacki-Richter, O., Marín, V.I., Bond, M., Gouverneur, F. (2019), "Systematic review of research on artificial intelligence applications in higher education", *International Journal of Educational Technology in Higher Education*, Vol. 16, No 1, pp.1-27.
- Zhai, C., Wibowo, S. (2023), "A systematic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university", *Computers and Education: Artificial Intelligence*, Vol. 4, 100134, <https://doi.org/10.1016/j.caeai.2023.100134>.
- Zhai, X., Chu, X., Chai, C.S., Jong, M.S.Y., Istenic, A., Spector, M., Liu, J.B., Yuan, J., Li, Y. (2021), "A Review of Artificial Intelligence (AI) in Education from 2010 to 2020", *Complexity*, Vol. 2021, No 1, 8812542, <https://doi.org/10.1155/2021/8812542>.
- Zhang, H. (2022), "AI-driven Learning Platforms and Their Impact on Student Performance", *International Journal of Educational Research*, Vol. 46, No 3, pp.300-315.
- Zong, Z., Guan, Y. (2024), "AI-Driven Intelligent Data Analytics and Predictive Analysis in Industry 4.0: Transforming Knowledge, Innovation, and Efficiency", *Journal of the Knowledge Economy*, pp.1-40.
- Saurabh, K., Arora, R., Rani, N., Mishra, D., Ramkumar, M. (2022), "AI led ethical digital transformation: Framework, research and managerial implications", *Journal of Information, Communication and Ethics in Society*, Vol. 20, No 2, pp.229-256.
- Deepa, R., Sekar, S., Malik, A., Kumar, J., Attri, R. (2024), "Impact of AI-focussed technologies on social and technical competencies for HR managers—A systematic review and research agenda", *Technological Forecasting and Social Change*, Vol. 202, 123301, <https://doi.org/10.1016/j.techfore.2024.123301>.

Appio, F.P., Frattini, F., Petruzzelli, A.M., Neirotti, P. (2021), "Digital transformation and innovation management: A synthesis of existing research and an agenda for future studies", *Journal of Product Innovation Management*, Vol. 38, No 1, pp.4-20.

Rana, N.P., Chatterjee, S., Dwivedi, Y.K., Akter, S. (2022), "Understanding dark side of artificial intelligence (AI) integrated business analytics: assessing firm's operational inefficiency and competitiveness", *European Journal of Information Systems*, Vol. 31, No 3, pp.364-387.

Bachmann, N., Tripathi, S., Brunner, M., Jodlbauer, H. (2022), "The contribution of data-driven technologies in achieving the sustainable development goals", *Sustainability*, Vol. 14, No 5, 2497, <https://doi.org/10.3390/su14052497>.

Ali, W., Khan, A.Z., Ali, M. A., ul Amin, N., Kamran, M. (2024), "Influence of Artificial Intelligence on Cost Efficiency and Organizational Performance with The Mediating Role of Cost Management Control Systems in Transformational Organizations", *Bulletin of Management Review*, Vol. 1, No 4, pp.59-91.

Jarrahi, M.H. (2018), "Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making", *Business horizons*, Vol. 61, No 4, pp.577-586.

Ononiwu, M.I., Onwuzulike, O.C., Shitu, K. (2024), "The role of digital business transformation in enhancing organizational agility", *World Journal of Advanced Research and Reviews*, Vol. 23, No 3, pp.285-308.

Ismanov, I., Qayumov, N., Mukhamadjonova, D., Akhmadaliyev, B. (2024), "AI and Cost Management: Strategies for Reducing Expenses and Improving Profit Margins in Business", in: *2024 International Conference on Knowledge Engineering and Communication Systems (ICKECS)*, Vol. 1, IEEE, pp.1-7.

Enholm, I.M., Papagiannidis, E., Mikalef, P., Krogstie, J. (2022), "Artificial intelligence and business value: A literature review", *Information Systems Frontiers*, Vol. 24, No 5, pp.1709-1734.

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DIRBTINIO INTELEKTO VEIKSNIAI, LEMIANTYS ORGANIZACINĮ ANGLŲ KALBOS MOKYMO ĮSTAIGŲ VEIKLOS EFEKTYVUMĄ KINIJOJE**Na Li**

Santrauka. Šiame tyrime nagrinėjamas dirbtinio intelekto diegimo priemonių (organizacinės investicijos į DI, intelektualios mokymo sistemos, adaptyvios mokymosi platformos, kultūriškai jautrūs DI įrankiai ir dėstytojų mokymai DI srityje) poveikis skirtingiems Kinijos anglų kalbos mokymo įstaigų organizacinės veiklos rodikliams (studentų skaičiaus augimas, suasmeninta mokymosi patirtis, padidėjęs studentų įsitraukimas, geresnis mokymo efektyvumas ir organizacinių pajamų augimas). Tyrime pritaikyta daugiamatė daugybinė tiesinė regresinė analizė. Tyrimo rezultatai atskleidė, kad DI diegimas žymiai pagerina anglų kalbos mokymo įstaigų Kinijoje organizacinius veiklos rezultatus. Pabrėžtinios strateginės investicijos į DI pagrįstas technologijas: adaptyvias mokymosi platformas, kultūriškai jautrius DI įrankius, intelektualias mokymo sistemas ir dėstytojų mokymus DI srityje. Tyrimo išvados leidžia pateikti naudingų teorinių ir praktinių implikacijų pedagogams, politikos formuotojams ir verslo vadovams. Todėl institucijų vadovai turi suvokti DI ne tik kaip technologinį atnaujinimą, bet ir kaip neatsiejamą organizacinės strategijos elementą, palaikantį veiklos efektyvumą, finansinį tvarumą ir ilgalaikį augimą.

Reikšminiai žodžiai: dirbtinis intelektas; anglų kalbos mokymo įstaigos; pajamų augimas; organizacinis veiklos efektyvumas; Kinija.