



Integrating Cross-Cultural Insights into Intelligent English Teaching Modes Through Deep Learning and Artificial Intelligence

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Abstract: In the process of deep learning mode and artificial intelligence technology bringing innovative changes to English teaching, this article focuses on innovation in education and teaching in the era of artificial intelligence. Based on the setting of artificial intelligence courses, the reform of the English teaching model is innovative. Using the innovative teaching management model and developing a new type of artificial intelligence teaching management system, English teaching can achieve the reform of teaching models and the expansion of artificial intelligence technology under the joint drive of deep learning and artificial intelligence.

Keywords: deep learning; artificial intelligence; intelligent English teaching; Cross-Cultural Insights.

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1 INTRODUCTION

In recent years, teaching model reform in the artificial intelligence model has resulted in positive explorations of the education department and schools. Through artificial intelligence technology, we have made positive reforms and explorations of teaching management models, education, and teaching methods. Teaching has expanded on a new path. In terms of English teaching, it pays more attention to highlighting the characteristics of English courses. Significant reforms have been achieved with the extensive application of artificial intelligence technology in the era of big data. Through innovation and the creation of new teaching models, English teaching is closer to students' needs and meets each of them. Teaching tasks at different teaching implementations. This article analyzes the current situation of profound English teaching at the present stage, innovates teaching concepts and deep research based on English teaching in the era of artificial intelligence, and fully applies the technical impact and concept innovation brought by the era of artificial intelligence to English teaching. The teaching knowledge system makes education and teaching research the main models and innovation points of English teaching innovation. In terms of continuous improvement of students' profound learning of English teaching, highlighting innovative technical means makes

English learning no longer a boring discipline but an English innovation teaching model reform with artificial intelligence technology assistance [5].

2 SMART ENGLISH LEARNING STATUS IN DEEP LEARNING MODE

The deep learning model of English in the era of artificial intelligence is affected and restricted by various aspects. Artificial intelligence technology brings new challenges and impacts the need for teaching evaluation, teaching quality, and student learning efficiency. Implement more precise and refined means so that the learning and education departments can continuously improve the innovation of teaching and education concepts in developing artificial intelligence information [21].

2.1 Teaching Reform in Artificial Intelligence Mode

In the era of artificial intelligence, the deep learning and teaching processes of English disciplines are affected and restricted by various factors, such as technical resources and the information age. When using the artificial intelligence model for in-depth teaching, English teachers pay more attention to applying artificial intelligence technology [17]. In the learning process, middle school students can better realize the communication learning of 1 to 1 and 1 of multiple modes under artificial intelligence technology. Let students and teachers achieve more accurate knowledge on a more intelligent learning platform. At the same time, they can also better realize the innovation and reform of teaching and education models. Table 1 shows the tendency and proportion of parents' choice of English learning.

<i>Number</i>	<i>Parents' choice of children's English learning</i>	<i>Proportion</i>
1	<i>There are advantages to each online and offline, which can be used to match two learning methods for children</i>	33%
2	<i>Online teachers and products have been caught up or even beyond offline and convenient time, only learning through online</i>	29%
3	<i>Offline teaching interaction is good, and only is willing to choose offline learning for children</i>	28%
4	<i>It doesn't matter</i>	10%

Table 1: Parents' choice and proportion of their children's English learning.

2.2 Infusion of Modern Education Concepts

In traditional teaching concepts, we attach importance to the interactive learning of students and teachers. In modern education concepts, we must pay attention to the ability of students and teachers to use information technology and teaching resources in the era of artificial intelligence. Through extensive collection and concluding teaching resources, within adequate classroom time, fake intelligence teaching model reforms are used to achieve comprehensive instillation of teaching resources and concepts [8]. At the same time, the era of artificial intelligence has brought more obvious assistance and promotion effects to the modernization of education and teaching concepts. Through the extensive application of synthetic intelligence databases, students' learning abilities, learning preferences, and academic performance have been improved, and they are realized. Make students' characteristics and learning abilities of different disciplines.

2.3 Standardized Assessment and Evaluation Mode

Standardized education and teaching evaluation models are based on the scientific evaluation of students and teaching levels under artificial intelligence technology. Then, through the teaching mode reform process, students in the era of artificial intelligence are learning efficiency, examination

results, classroom performance, etc. In the data collection and summary process, the evaluation and assessment model under artificial intelligence technology was established so that students' learning could be better tested. Effectively avoid the one-sided assessment method of students' learning quality based on only one test score[4]. In Table 2, the satisfaction of using English textbooks, the overall result is average.

<i>Number</i>	<i>Degree of evaluation</i>	<i>Proportion</i>
1	<i>very satisfied</i>	9%
2	<i>satisfy</i>	29%
3	<i>Satisfied</i>	30%
4	<i>Dissatisfied</i>	32%

Table 2: The results of the satisfaction of using English textbooks.

2.4 Teaching Evaluation Under Intelligent Data Monitoring

By establishing an intelligent data monitoring platform, the teaching data resource library in artificial intelligence models is reasonably used. By evaluating teachers' teaching work, students can be more accurate by constructing intelligent data mobile terminals to play a good role in teaching. Performing exercises effectively to innovate the traditional learning concept effectively. In the process of data construction, we must pay attention to the evaluation and evaluation of the quality of different students and establish an intelligent English teaching assessment platform so that students' English learning depth and teaching quality can be improved and so that students' vocabulary reserves Oral expression and actual application ability have improved well [11].

2.5 Intelligent English Education in Human-Machine Interactive Mode

Establishing human-computer interactive teaching models in the era of intelligent teaching is a practical innovation point for profound teaching in English. English teaching not only focuses on the ability to master the language but also pays more attention to the expression of essential English and the application ability in the actual environment. Under artificial intelligence technology, the use of human-machine interaction teaching models, allowing the English expression ability of spoken English and the test ability of English expression in different living environments, is becoming an essential part of English teaching in class so that students and teachers in the depth of English in English During the learning process, we can well grasp the actual application ability of English and let the teaching of the English curriculum play the authentic charm of a language discipline. Figure 1 analyzes the proportion of different teaching elements in deep English learning [20].

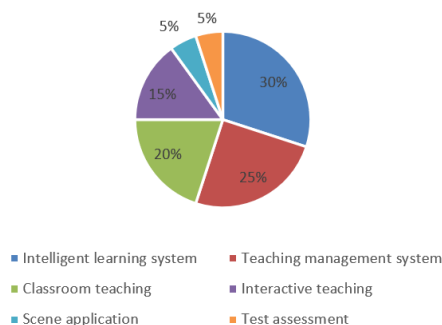


Figure 1: The proportion of different teaching elements in deep learning in English.

3 DURING THE DEEP LEARNING PROCESS, THE HIGH INTELLIGENT ASSESSMENT OF INTELLIGENT ENGLISH TEACHING

3.1 Artificial Intelligence Promotion In-depth Learning of English Discipline

Artificial intelligence deep education is a high-efficiency learning technique in the interdisciplinary field. He can imitate different language environments and build different language application scenarios while learning English. Incorporating the environment makes the application of language more practical. The deep learning of English disciplines is manifested in detecting the ability of English grammar and actual English reading and, more importantly, in the essential application ability of English as a language discipline[2]. In education and teaching, through the application and reflection of artificial intelligence-related technologies, English teaching has more artificial intelligence informatization elements, and the deep learning of English is closer to improving language communication.

Brilliant English deep learning is also reflected in the reform of the English teaching model. We can play life through artificial intelligence technology by integrating different English teaching courses and content. Let artificial intelligence and information technology be used in other language environments and roles. The teaching process of students as the main body is more practical. In the process of personalized education, the use of artificial intelligence to conduct deep learning in English disciplines is based on the different learning habits and personalized learning differences, and targeted intelligent deep learning can effectively improve the quality of learning. In building a virtualized learning environment, artificial intelligence technology provides real language exchange scenarios for different language environments, making human-machine interaction communication a normal state, and the charm of language discipline is genuinely reflected in the communication process. Let students allow students to master and promote knowledge points to have a more practical role and performance [6].

3.2 In-Depth Transformation of Artificial Intelligence to Promote Teaching Capabilities

Improving teaching quality at this stage mainly relies on applying artificial intelligence technology to achieve better auxiliary English learning. In the process, it is not only manifested in the reading comprehension, grammatical use, and vocabulary increases of English literature but also in the expression ability of English in the language environment[14]. To effectively promote the innovation of teachers' teaching concepts, the application of artificial intelligence technology can effectively encourage the continuous deepening of teaching ability. In the application and development of artificial intelligence technology, the teaching process depends on both artificial intelligence technology foundations and the application of artificial intelligence technology to realize the innovation of teaching models and the intake of teaching concepts. The discipline, but also the mastery of knowledge, is an integral part of interactive expression [15]. Figure 2 analyzes the proportion of global data network teaching resources in 2021.

The deepening reform of English teaching in the era of artificial intelligence still needs to maximize the benefits of artificial intelligence technology in the English teaching team to deepen the application and innovation of intelligent technology. Play a huge role in teaching and learning. In promoting the reform of the English teaching model, national government departments and educational institutions are continuously paying attention to the application of artificial intelligence technology, an essential ideological innovation. In addition, the technical innovation in the development of various languages and interaction in the development of artificial intelligence technology fully reflect the critical role and status of artificial intelligence technology in deep English learning[7],[10].

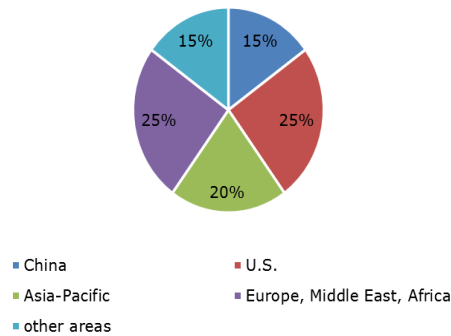


Figure 2: 2021 global data network teaching resources proportion.

3.3 Highly Intelligent Teaching Evaluation Model

We can also apply this particular amount of evaluation to the inspection of various teaching content and language skills, such as:

Cognitive vocabulary examination, student learning improvement rate calculation formula:

$$XL(p) = \frac{C(a)}{G(a)} \times 100\% \quad (1)$$

Among them, C (a) means student vocabulary reserves, and G (b) represents the vocabulary reserves specified in the outline; the calculation value of XL (p) is used as one of the indicators to evaluate the learning efficiency of students.

Show the student's learning improvement rate.

$$TG(p) = \frac{F(b)}{G(b)} \times 100\% \quad (2)$$

Among them, F (b) indicates the reserves of the vocabulary of the reuse, G (b) represents the reuse of reuse stipulated in the outline, and TG (p) is used to evaluate the quality of students' deep learning.

Evaluation of teachers' teaching quality:

$$ZL(p) = \frac{V(1)+V(2)+V(3)+\dots+V(i)}{i} \times 100\% \quad (3)$$

Among them, V (i) means the quality of the teaching of English teachers on the teaching points of various knowledge points[9].

Through the quantitative analysis and evaluation of the English teaching process, the teaching quality and effects of students and teachers in different aspects can be more scientific, fair, and accurate to evaluate the actual teaching ability of a teacher and the natural quality of students' deep English learning. It improves students' language useability and provides a better basis and performance management basis for teaching and education management [22].

3.4 Artificial Intelligence Full Coverage Student Learning Behavior

During the application of artificial intelligence technology, the different stages of English deep learning and the teaching process need to be detailed to explore the entire intelligent learning

process to cover the deep learning of students' English. The application of artificial intelligence technology in different learning stages is also another. Big data technology brings more teaching resources and educational concepts to English learning. In fully applying the technology and resources of artificial intelligence, we must pay attention to learning with students. The integration of the stage allows students to graduate with the knowledge and content of deep English learning to use the integrated application of English big data knowledge bases, artificial intelligence exchanges, and artificial technical management in all stages of deep learning throughout English. Artificial intelligence covers all aspects of learning applications and English exchanges. In the process of evaluation and effect application of learning, through intelligent data collection quantification, evaluate the true learning quality of students at various learning stages, let systematic artificial intelligence information collection, and become the accurate indicator of evaluation of deep learning of English, so that let the fundamental indicators of English learning, let the real indicator of English deep learning, let the accurate indicator of English deep learning, allow The learning effect is promoted. The learning effect is improved step by step. Record the problems of students 'learning in learning and conduct targeted commissioning training to achieve steady improvement in students' English teaching quality. At the same time, it also indeed exerts the authentic charm of English as a language discipline [3].

4 DEEP ENGLISH LEARNING PATHWAY BASED ON ARTIFICIAL INTELLIGENCE TECHNOLOGY

With the support of artificial intelligence technology, deep learning has multiple ways and methods. In the process, English teaching, through the process of English learning, technology integration, and application, can make English teaching not only pay more attention to the development of students' thinking ability but also pay attention to the development of students' thinking ability, and pay attention to the development of students' thinking ability, and pay attention to the development of students' thinking ability. Using students' language environment can better reflect that in understanding Western language and Western culture, students can have a strong interest in learning English and establish correct ideological value orientations. Remembering learning methods, making English discipline teaching more attractive, making the knowledge of English learning more apparent, and improving learning quality and efficiency are more convenient and efficient [16].

4.1 Build a Layered Learning Plan Through Intelligent Judgment

In building an English-deep learning process, artificial intelligence teaching can make a classified learning plan according to different learning methods, according to the actual learning of the students, and the ability and level of English learning can be effectively obtained by applying the learning plan of different students. Promote. For students with varying language talents, constructing a target English learning program to make learning become oriented for different stages of learning plans, formulating target expectations, and allowing students to achieve various stages under the premise of education and teaching outlines. Learning goals enable students to meet the English learning goals and complete education and teaching requirements through a phased learning plan to make the learning process more goal-oriented and fulfilling. Intelligent English learning programs can build a more scientific learning plan for students with different learning stages and learning abilities so that students and teachers can find more teaching models that fit the students in various teaching links. [18]. In promoting students' learning knowledge, the teaching model reform of the discipline is effectively enhanced so that students can improve their actual abilities on the intelligent teaching platform. The scoring standard for scene language applications is constructed in Table 3.

<i>Grading</i>	<i>Standard introduction</i>	<i>Proportion</i>	<i>Subtotal</i>	<i>total</i>
<i>language expression</i>	<i>It is persuasive, and the theme is clear</i>	<i>10</i>	<i>35</i>	<i>100</i>

	<i>Clear ideas and strong logic</i>	12		
	<i>For example, strong argumentation</i>	5		
	<i>Inspiring thinking, causing resonance</i>	8		
<i>Specification</i>	<i>Organization framework specification</i>	9	30	
	<i>Language application is logical</i>	11		
	<i>Reasonable viewpoints</i>	4		
	<i>Natural coherence is too smooth</i>	6		
<i>Scene application</i>	<i>Follow scene language</i>	10	35	
	<i>Follow the scene's actual situation</i>	12		
	<i>Vocabulary meets requirements</i>	8		
	<i>The scene characteristics are clear</i>	5		

Table 3: The scoring standard for scene language application.

4.2 Build a New Learning Method Through Personalized Intelligent Analysis

Different students and students with different language talents have an obvious ability and interest in deep learning English. We must fully consider the characteristics of personalized students, differentiated learning and education for students with different learning abilities, and intelligent technical means. Analyze students 'targeted teaching and education models, formulate differentiated education plans, change the traditional teaching concepts, and improve students' learning in the application. In the actual teaching process, there are targeted questions and confusion. At the same time, by using the intelligent teaching platform for English knowledge points, a more accurate 1 - - 1 counseling relationship is achieved. In the status quo, effective practice and mastery are necessary so that differentiated students can achieve synchronous progress, effectively improve the efficiency and quality of learning, and allow students to effectively avoid the waste of resources and time in learning so that the class time will be fully utilized. Essence[12],[13].

4.3 Use Intelligent Teaching Resources to Expand Learning Depth

Use artificial intelligence teaching resources to promote efficient learning. Traditional teaching is limited to students' learning methods for the time and space of learning. The artificial intelligence of developed land brings a wide range of teaching resources and scenarios. By applying resource libraries at different stages of education, it can fully integrate artificial intelligence and deep learning in English. Auxiliary students have mastery of varying knowledge points. At this stage, in the era of artificial intelligence, online teaching resources are shared, greatly enhancing educational institutions and education and teaching groups in different regions. For differentiated teaching resources, give students longer and more in-depth learning. Let students break the traditional language thinking mode and make the use of English closer to the actual scene of life, which is conducive to understanding and exploring different languages in the Western language environment [19].

4.4 Use Human-Computer Interaction Methods to Promote Independent Learning

The deep learning of English pays more attention to the application and expression in practice. By building the learning mode of interpersonal interaction, the autonomy of learning is more flexible.

Applying artificial intelligence technology to the natural language environment makes language expression more realistic in different scenarios. The artificial-intelligence-interactive communication method is an essential symbol of the era of artificial intelligence. Language expression is the output of personal thinking, cultural learning, and exploration in the English language environment. It is more targeted by construction[1]. The Sexual interaction learning model makes students' autonomous learning more convenient so that students can realize practical English applications through independent learning and interpersonal interaction after leaving the classroom. In the era of artificial intelligence, English teaching better reflects the fundamental role of English language application. It builds a speculative classroom teaching model so that English teaching not only implements the basis of grammar application and reading comprehension but also pays more attention to the application of grammar. Students use language for speculative discussions and exercise their theoretical abilities in the English language environment so that they can fully improve their thinking and analytical skills in the English language environment in the process of autonomous learning.

4.5 Use Intelligent Data Monitoring Science to Master the Learning Progress

The application of the intelligent teaching and learning data monitoring system can better grasp and understand the proper grasp of the knowledge points of each student in the English learning process. And standard. Making students' academic performance more scientific and efficient is not only manifested in the scores of the classification results but also in the actual situation of students in various aspects such as classroom teaching, language expression, language application, etc., In the process of using artificial intelligence technology for discipline data monitoring, the school and education departments must rely on the reform of the teaching model to achieve intelligent data collection so that students' achievements are more suitable for each student's actual learning effect and so that the language is allowed to The authentic charm of the discipline and the quality of learning are effectively displayed. Aiming at the background of intelligent learning, the process of deep learning is more quantitative and standardized, and students' learning fits the real needs of each student. The test of deep learning is manifested in the results and scores of test papers and through quantitative intelligent data monitoring to make students' subject evaluation more scientific. Figure 3 analyzes the proportion of interpersonal interactive markets under artificial intelligence technology in 2021.

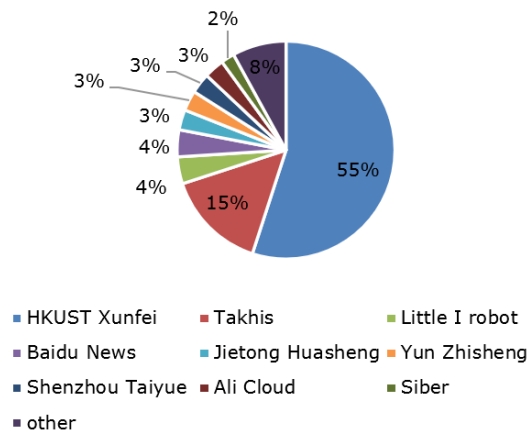


Figure 3: The proportion of interpersonal interactive markets under artificial intelligence technology 2021.

4.6 Through Intelligent Assessment and Pumping for the Old System of Teaching

Applying new artificial intelligence technology has had a more significant impact on traditional teaching models and concepts. In learning models and teaching concepts, students should combine actual teaching and scene needs to make intelligent deep learning, fully thoroughly learning, fully learning, understanding, and thoroughly learning. Applying all aspects and stages of student learning, one-to-one English deep learning in the human-computer interaction mode, and targeted English replenishment training to improve personal learning quality steadily. In oral English improvement and real-life scenarios, the progress of speculative ability in the English language environment should be promoted by the advanced learning mode through the different levels of English learning in various stages, and the reform of the teaching mode is gradually encouraged to enable students' English teaching in a reasonable and developed real-life language environment.

5 CONCLUSION

Artificial intelligence technology has brought a new education model reform and innovation to the in-depth teaching of English courses. Through analyzing the status quo of the English teaching and education model and the inquiry into the deep learning model of English, the school and education departments must be innovated in the context of artificial intelligence technology. Effective integration at various stages can make English learning more in line with the application of real-life scenes so that English testing and teaching quality assessment are not only reflected in the score of a test paper but, more importantly, for language disciplines, language, and culture. In terms of grasp,

This article analyzes the application environment of artificial intelligence technology in the profound teaching process of artificial intelligence technology. It evaluates the analysis model of actual English teaching and performance construction. Essence: It can significantly improve the quality and efficiency of deep English learning, make students' learning more enthusiastic, and steadily improve the quality of education. The integration of cross-cultural insights serves as a cornerstone for shaping global citizens who are proficient in English, culturally competent, and capable of navigating the complexities of an increasingly interconnected and diverse society. Through a thoughtful synthesis of deep learning, artificial intelligence, and cross-cultural design, we are forging a path toward a future where language education becomes a powerful force for unity, understanding, and collaboration across borders.

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REFERENCES

- [1] Bell, W.: Study on University English Mobile Learning Based on Smartphones, *Science and Technology Innovation Guide*, (8), 2015, 90-97.
- [2] Biggs, j. B.: Individual Differences in Study Processes and The Quality of Learning Outcome, *Higher Education*, (8), 2019, 381-394. <https://doi.org/10.1007/BF01680526>
- [3] Cao, M.; Wang, J.: Intelligent Time University English Culture Teaching Investigation Research, *Education Teaching Forum*, (10), 2020, 95-96.

- [4] Costing, S.; Xiang, R.: etc. From Passive Learning to Active Learning a Nation's Eleventh Valid Teaching Theory and Practice Seminar, *Global Education Outlook*, (7), 2016, 123 -127.
- [5] Duan, J.: Strategies for Promoting Deep Learning in the Environment, *China Electrification Education*, (05), 2018, 38-39.
- [6] Entwistle, N. J.; Ramsden, P.: *Understanding Student Learning*, London: Croom Helm, (2), 2013, 60-65.
- [7] Fu, Y.; He, J.: Exploration of the English Teaching Mode Based on Mobile Learning Takes Qiongzhou College as an Example, *Journal of Jilin Radio and Television University*, (01), 2015, 38-39.
- [8] Gan, J.; He, Gao D.: Outlook for Study Analysis and Foreign Language Teaching in the Era of Big Data, *Foreign Language Electrification Teaching*, (03), 2016, 27-30.
- [9] Guo, Y.: On Deep Teaching: Source, Foundation and Concept, *Education Research and Experiments*, (3), 2017, 1-1L.
- [10] Liu, Z.; Li, A.: aect2004 Definition of Interpretation of Electrification, *Education Research*, (12), 2004, 44-48.
- [11] Marton, F.: On Qualitative Differences in Learning: Outcome and Process, *British Journal of Educational Psychology*, (46), 2016, 4-11. <https://doi.org/10.1111/j.2044-8279.1976.tb02980.x>
- [12] Pang, W.: On the Self-Study of Students, *Journal of East China Normal University*, (6), 2021, 78-83.
- [13] Pang, W.: *The Principles and Strategies of Self-Learning and Teaching and Teaching*, Shanghai: East China Normal University Press, (5), 2013, 89-98.
- [14] Prosser, M.; Millar, R.: The 'How' AND * WHY 'of Learning Physics, *European Journal Of Psychology of Education*, (4), 2019, 513-528. <https://doi.org/10.1007/BF03172714>
- [15] Shi, X.: The Basic Japanese Curriculum Mobile Learning Mode Explores the Application of QQ mobile learning platform, for example, *Journal of Mudanjiang University*, (12), 2015, 152-154.
- [16] The application of Chen Chunmei. Artificial Intelligence in English Writing — Statistics and Analysis Based on China Zhiwang, *Journal of Leshan Normal University*, (7), 2019, 105-111.
- [17] Wang, Y.: Practice and Research of Hybrid Learning Mode Under the Guidance of Deep Learning Theory, *China Distance Education*, (04), 2018, 49-50.
- [18] Wang, Y.: In the Context of Artificial Intelligence+Big Data, *University English Teaching Changes are Discussions*, *Overseas English*, (15), 2018, 80-81.
- [19] Xia, Z.: Application and Exploring the Application of Mobile Phones Based on Smartphones in University -Fudu learning, *Journal of Hubei Correspondence University*, (6), 2013, 67-69.
- [20] Xu, Y.: Application of Smartphones in College Teaching, *Journal of Jiamusi Vocational College*, (10), 2015, 218-219.
- [21] Zhang, H.; Wu, X.; Wang, J.: The Goal and Evaluation System of Deep Learning, *China Electrification Education*, (07), 2014, 12-19.
- [22] Zhou, W.; Chen, M.: Expressive Evaluation Pointing to Deep Learning First Visit Stanford University, *Global Education Outlook*, (7), 2017, 3-9.