International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

Development Administration of Smart Technology of Pigai System

Luo Feiyan[1], Kamolporn Kalyanamitra[2], Satit Niyomyaht[3], and Nattawat Siriphornwut[4]
Faculty of Political Science, Bangkokthonburi University, Thailand
[1]E-mail: 1480521463@qq.com, ORCID ID: https://orcid.org/0009-0003-8654-9941
[2]E-mail: Kamolporn@hotmail.com, ORCID ID: https://orcid.org/0009-0009-8911-3047
[3]E-mail: satit.niy@bkkthon.ac.th, ORCID ID: https://orcid.org/0009-0006-4153-7893
[4]E-mail: NattawatSiri41@gmail.com , ORCID ID: https://orcid.org/0009-0009-2939-9426
Received 19/09/2023 Revised 24/09/2023 Accepted 30/09/2023

Abstract

Background and Aim: This qualitative study has three objectives: (1) to analyze the feedback from learners regarding the Pigai system, (2) to examine the management and advancement of intelligent technology within the Pigai system, and (3) to enhance proficiency in utilizing the smart technology integrated into the Pigai system.

Materials and Methods: The research involved purposive sampling and selected key informants from a pool of 25 individuals experienced in utilizing the Pigai system. The data collection methods employed were in-depth interviews, and data analysis followed a descriptive approach.

Results: The research findings showed that: (1) Those who are involved in the Pigai system want the system to be more efficient, (2) the management and development of intelligent technology of the Pigai system was through management and supervision that was essential to help and guide learners. It combined real learners' situations to help them find more suitable learning styles, and (3) the development of abilities using smart technology of the Pigai system overcoming the limitations of time and space and taking full advantage of the advantages of the information age.

Conclusion: The research highlights three key aspects of the Pigai system: the desire to increase efficiency among users and the important role of management and supervision in facilitating personal learning. and the system's ability to use intelligent technology to overcome temporal and spatial limitations. which corresponds to Opportunities presented by the information age These insights highlight the importance of continuous improvement and user-centered development in optimizing the Pigai system for effective education.

Keywords: Administration Development; Smart Technology; Automatic Essay

Introduction

Smart education technology should not only cultivate national citizens in the general sense but also global citizens who adapted to the development needs of the 21st century and have a global vision and innovative thinking. Adhering to the concept of "open sharing", smart education technology realized the seamless integration and barrier-free circulation of global high-quality education technology resources through a variety of ways (self-construction, introduction, purchase, exchange) so that students and the public around the world could freely access any suitable educational resources (multimedia courseware, video courses, teaching software, etc.). The seamless integration and sharing of global high-quality educational technology were a "great wisdom" to break through the geographical restrictions of educational resources, which would narrow the world education gap and improve the quality of education in less developed countries and regions.

Smart education technology was a new form of technology in the digital age, which was qualitatively different from that in the industrial age. Smart education technology was an important goal of the digital transformation of technology and the future direction of technology development. Based on following the law of technology and the law of talent growth, smart education was fully integrated into modern technology to empower, drive, and lead, promoted comprehensive and highly unified personal development and social development, provided suitable education for each learner, and provided systematic talent support for social development. Committed to building a high-quality personalized lifelong learning system that everyone could learn, learned everywhere, and learned from time to time; Re-shaping the educational content, focusing on the development of quality education, training learners' ability of higher order thinking, comprehensive innovation, and lifelong learning; integrate physical space, social space, and digital space, innovate education and teaching scenes, promoted the integration of human and technology, and construct a new paradigm of teaching and learning; With data governance as the core and digital intelligence technology as the driving force, the

Citation Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

reengineering process was optimized, the education governance system and governance capacity were modernized, and the efficiency, effectiveness, and benefit of education were enhanced.

Nearly 80% of Chinese colleges and universities have achieved full coverage of wireless networks. Online multimedia classrooms account for more than 60% of the total number of college classrooms in China, and the application rate of new-generation information technology in smart campus construction was close to 90%. The development of smart education technology in China had a solid foundation and distinct characteristics. First, it was people-oriented to satisfy people's satisfaction with the value of education guidance. The second was the inheritance and development of excellent traditional Chinese education ideas, such as teaching according to aptitude, and integrating knowledge and practice. Third, it was the organic combination of top-down macro promotion and bottom-up ecological construction of technology.

The challenges of smart education technology in China were the following. Firstly, it was a challenge to cultivate students' self-organizing learning ability. Learning was the learner's business, requiring them to activate their emotional dynamical system, engage their cognition, and focus on the mind and practice. The initiative, collaboration, innovation, adaptability, and practicality of learning required learners to have good self-organization ability, which was not a small challenge for learners who had been accustomed to traditional give-and-take. Self-organized learning requires learners to take responsibility for their learning, to learn self-guidance, self-monitoring, self-coordination, and self-management, and to make correct decisions and take correct actions in practice. Secondly, there was a lot of fragmentation in informal learning in a network environment. It was another challenge to transform fragmented information into related knowledge structures. Thirdly, it was how to overcome the time-wasting gap. Research showed that due to the lack of guidance and monitoring, information devices such as computers, mobile phones, and the Internet were used more for entertainment and recreation. Therefore, it was crucial to cultivate learners' good digital literacy and develop the habit of making good use of technology. Research on smart education technology to provide active intervention to students who lack self-control has also become an important research topic of smart education technology.

Smart education technology based on modern information technology such as 5G communication technology and artificial intelligence technology has become a hot issue in research. As a college educator, with more than ten years of teaching experience and an in-depth understanding of smart education technology, the researcher believed that the application of smart education technology was a challenge as well as an opportunity.

With economic globalization, social information, and the challenges of a knowledge-based economy. The research on the development administration of smart education technology has become more and more important. Based on the concept of scientific development administration as a guide, research on methods and theories of smart education technology, suggests that administrative theory and method could help education reform to keep up with the development of technology. 1) This research helped to solve the coordination problem between relations between the development of technology and education 2) The research contributes to how to better administrate and manage smart education technology for cultivating students' independent learning ability

Objectives

1. To know the feedback of students and teachers on Pigai's automatic essay scoring system (https://www.pigai.org), a classic representative of smart education technology to illustrate the present development of smart education technology.

2. To know the management and guidance of the Pigai automatic evaluation system as a reference for management and guidance for the development and management of smart education technology.

3. To know the cultivation of students' independent learning ability with the help of smart education technology through case analysis of the Pigai network.

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

Literature review

Smart Education Technology

Yang et al. (2021) suggest that smart education technology in the 5G era provided basic support for smart education from environmental perception, data acquisition, data security, and other aspects, relying on intelligent technologies such as cloud computing, artificial intelligence, and machine learning to drive the generation of smart education. Smart education technology uses virtual reality, holographic projection, and other technologies to optimize the presentation of teaching content and create a learning space that integrates virtual and real to help the development of smart education. Zhu, Z.T., & Bin, H.(2012) believed that smart education referred to the use of new-generation information technologies such as the Internet of Things and mobile networks. Through the construction of smart learning environments and the use of Smart Pedagogy, learners were encouraged to carry out smart learning, thereby raising the expectation of success, that was, producing people with high intelligence and productivity.

Automatic Essay Scoring System

The first AES system, Page Essay Grade (PEG), was developed by a former high school English teacher, Ellis Page, who used multiple regression to associate surface text features in a targeted essay to those in a corpus of essays on the same topic that had been scored by English teachers (Grime and Warschuaer, 2008). Some foreign scholars have studied the application of AES in the context of smart education. Attali (2004) used the automatic evaluation system "Criterion" to review students' compositions from grades six to twelve. The results showed that the system was mainly focused on students' simple mechanical errors. There were deficiencies in correcting the composition idea and structure.

Pigai Automatic Essay Scoring System

Pigai network was an online English composition automatic correcting service system developed in China, including a platform for students and a platform for teachers. Students could get their composition scores in real-time through the system and modify their compositions independently according to the system's comments. On the other hand, teachers could obtain the reference opinions of individual students based on six dimensions of content relevance, text structure, sentence, phrase collocation, vocabulary, and fluency, as well as the relevant statistics of students' compositions. The operating idea was to rely on the abundant corpus resources behind the development of the system and the support of computer cloud technology, to compare the students' compositions, that was, the interlanguage corpus, with the English and American native language corpus built into the system, to see the degree of word frequency and sentence pattern fit between the two, to give the evaluation results. Pigai network could currently run on multiple terminals such as computers, and mobile phones. (Xu, et al. 2019)

Methodology

Sources of Data

1) Documents (1) Pigai.org should be under teachers' management and guidance (2) Pigai could reduce teachers' workload and (3) Pigai could cultivate students' independent learning abilities.

2) Observations Observations were participant observations since the researcher was the teacher who taught these students in the research. The researcher observed how the students finished writing-tasks on Pigai during 16 weeks of the term, and how they improved their CET writings and independent abilities gradually.

3) In-depth Interview with 25 Key Informants. The purposive sampling techniques should be used to select the 25 key informants. The informants should have a wealth of information and experiences about the things that the researcher wanted to study or investigate.

Research Instrument

This research uses qualitative research methods, and the research instrument used in the research was the way of interview forms and in-depth interviews. The research mainly adopted a qualitative case study approach.

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

Data Collection

This research collected the results through in-depth interviews, and classroom observation as different tools for data analysis. The interviews focused on their cognitive processes, writing experiences of Pigai, impressions of smart technology, suggestions on online learning, and offline guidance and management. The interviews were retrospective accounts that tapped into participants' memories of writing performance of this term. Semi-structured interviews were conducted and audio-recorded, each lasting 30-50 minutes. Putonghua, the native language of the participants, was employed for the interviews in consideration of comfort and convenience.

Data Analysis

Data analysis was conducted using the following procedures. The research persistently assessed the interview data in depth by rereading the original transcripts, and then deconstructed, constructed, and reconstructed the meanings in the data with particular attention to possible emergent themes. Furthermore, after carefully examining the transcripts, the interview data were independently reread. To ensure the trustworthiness of the data and the themes, mutual discussions were held regarding disagreements, and the participants were invited to check the transcripts and the coding. Agreement was finally reached in the identification of emergent categories.

Results

1. Are guidance and management useful to students before finishing writing tasks?

Zou thought guidance and suggestions were necessary on the base of correction suggestions of Pigai. Lin agreed that their scores in CET writings had been improved by revising their compositions according to the suggestions of Pigai. Zhong corrected their writings according to feedback from Pigai as well as sample writings of CET (Zou, S. 2019).

Interestingly, Fu Wenya, Guo Siqi, Chen Haili, Xu Huasheng, Lin Caoyan, Lin Jiale, and Liang Hanwen were not clear about the effects of Pigai. Those students might not care so much about English or just fill in the form without careful thinking. Participants were non-English majors with a great study burden of learning their majors.

2. How much can I improve my self-learning ability by revising my articles according to the suggestions of the correction network?

More than half of the students proposed that it was helpful to cultivate students' ability for independent learning according to the automatic revision system of Pigai. They could get feedback from Pigai immediately after they submitted their compositions. For instance, Yan generally spent 30 to 50 minutes on writing such as listing outlines, making drafts, and submitting them. Generally, they would revise writings at least three times according to the modification opinions, and some even revised eight or more times, sometimes the modification would increase by 1 or 2 points, and sometimes the modification would reduce the score. Several times modification could increase by 2-3 points. In the process of revision and comparison with sample writings of CET, students thought their independent learning ability had been improved consciously and unconsciously.

3. In the CET-4 and CET-6 exams, could you improve your CET writing scores according to Pigai's feedback under teachers' guidance?

The researcher designed online writing tasks with clear targets, just assigning CET compositions. After students finish writing, the researcher would point out the key CET compositions such as the overall framework, and how to write each paragraph of their writing. Students felt they finished CET writings which were very helpful for CET this term. They finished online writing tasks with clear aims and motivations.

4. Pigai could immediately give you feedback on your composition and give suggestions for revision or the traditional way of manual correction by teachers, which do you like? Why?

In the interview, most students preferred Pigai, which could give immediate feedback and revision suggestions such as changes in words, grammar, and sentence patterns without facing the teacher. One student liked the traditional way of offline writing tasks. She thought that when teachers revised her writing, teachers preferred to highlight her mistakes in a specific and special way. So, it was easy for her to remember her mistakes and revise them next time.

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

5. How could Pigai reduce your workload as a college teacher?

Mr. Liang thought English teachers often needed to face a large number of students when carrying out teaching activities. As a fact, English teachers needed to correct a large number of students' English compositions, which was a huge workload. English teachers did not have enough time and energy to give detailed feedback and comments on student's compositions. Ms. Chen said that she assigned writing tasks on the Pigai network. Pigai network gave scores and feedback automatically. She just chose some compositions that could represent different English writing proficiency to discuss with students. For example, scores of two articles ranged from 60 to 70; scores of two ranged from 70 to 80; scores of two ranged from 80 to 90. I only needed to choose the representative articles of different scores to correct and discuss with my students instead of correcting more than 200 articles. The Pigai network helped to save a lot of time and energy (Chen Lingming et al. 2016)

6. How did you use Pigai to assign writing assignments and guide students?

Ms. Cai thought because English class time was limited, English teachers did not have enough time to explain the writing skills of CET in detail, and students often had to practice writing independently after class. Without the guidance of English teachers, students couldn't flexibly use their writing skills in the writing process and create high-quality CET-4 and CET-6 compositions. Moreover, to cope with the writing tasks of English teachers or after-class writing assignments, some students chose to retrieve, extract, and edit relevant English passages from the Internet. As a result, students created essays without thinking, which made the content of essays vague and lacked the process of combining thinking and creation, which couldn't effectively improve their English writing level. Mi Li proposed that the Pigai network was a good tool for him to guide students with different English proficiency and helped me to know their study attitudes. Therefore, he thought that proper guidance and management were necessary for the application of the Pigai network. The Pigai network was just a kind of smart education technology. It depended on how and who used it (Cai Xiaoliang. 2014).

Discussion

This research investigated the development administration of smart education through the case study of the Pigai automatic assessment system in China. 20 second-year undergraduates and 5 teachers from a university in western Guangdong Province of China participated in this study. Methods such as interviews and online surveys were conducted to analyze undergraduates' feedback on the Pigai automatic essay scoring system in the context of smart education technology. From online surveys and interviews, it might be concluded that Pigai could give responses to students' writing soon after the submission of writing and gave detailed correction suggestions which helped students realize their grammatical errors, spelling mistakes, and so on. It was suitable for university students because they had already independent learning ability of some degree.

In this part, the research reported and discussed the main findings of this research. Corresponding to the research questions, this part was divided into three parts, focusing on the relationship between the development technology and education; management and guidance of Pigai automatic essay scoring system as reference for offline management and guidance for development and management of smart education technology; and cultivating students' independent learning ability in the context of smart education.

1. Relationship between the development of technology and education

Digital technology gave new connotations to the structure, elements, and functions of education governance, and provided a new means and direction for realizing the modernization of education governance in all aspects. The deep application of digital technology provided strong support for smart education. In recent years, with the continuous advancement of educational informationization, the role of information technology in teaching has become more and more important. The Outline of the National Medium and Long-term Education Reform and Development Plan (2010-2020) issued by China points out that the development of information technology had a far-reaching impact on the reform of education. Pigai network was one of the typical representatives of smart education technology, and it could reflect the impact of technological development on education to promote the convenience of education. The students thought that the biggest advantage of Pigai was that the correction and feedback were timely and the scores were obtained immediately. Moreover, the composition scores could be constantly improved under the prompt of systematic sentence comments. Furthermore, the Pigai network provided online mutual evaluation, students could enjoy the articles of

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

the opposite side, and learn from each other's shortcomings. Teachers believed that Pigai saved their time in grading assignments so that they could summarize the situation of students according to the grading information so that the writing course teaching was more targeted.

The research on the application of automatic essay scoring systems could save teachers' time and effort in correcting and was more targeted to students' problems, which was conducive to the development of targeted teaching. In addition, students could get scores and revision suggestions immediately, which was conducive to improving students' interest in learning and the cultivation of independent learning ability. Therefore, the application of Pigai automatic assessment system correction was feasible, which had positive significance in improving students' English writing ability, stimulating students' learning interest, and improving existing problems in English writing teaching, and also contributed to the cultivation of students' autonomous learning ability advocated by English teaching reform.

Pigai's automatic essay scoring system was an automatic grading system based on corpus and cloud computing technology. It had the characteristics of sentence comment, iterative modification, real-time, and efficiency, which could effectively make up for the shortcomings of traditional feedback methods and better help English writing teaching. It provided a SAAS software-as-a-service) writing environment for students, marking online, and giving instant grading and diagnostic feedback. It could be analyzed from the aspects of writing content, organization, grammatical sentence pattern, text structure, and so on to make a formative assessment. At the same time, the system also provided some writing resources and editing tools to assist in writing teaching. The teacher operating system was also very convenient, one only needed to submit essay questions, examples, and grading criteria. Students completed the task online within the prescribed time according to the composition number, could immediately get their composition scores, and could refer to the feedback provided by the system and teachers to revise many times until they are satisfied.

Since the expansion of colleges in China, a country with the largest population in the world, college teachers have been confronted with an increasing number of students. As a result, college teachers had a heavy workload of reviewing students' assignments. College English teachers, who taught non-English majors, usually had two to three hundred students' writing assignments to go through and correct. If students were assigned three or four articles, it would be a huge tedious task of grading for teachers. In addition, students could not get feedback from teachers immediately because teachers had hundreds of articles to correct and needed time to finish them all. The timeliness of scoring and the convenience of Pigai have been recognized and welcomed by many teachers and students.

Informatization represented by the rapid development of computer technology, network technology, and communication technology has triggered profound changes in the world and reshaped the new pattern of world politics, economy, culture, and society. The development of technology has also triggered major changes in the field of education, which was not only reflected in the change of human learning methods and thinking modes but also in the development of education such as the form of curriculum, the form of classroom teaching organization and the change of school management, teaching evaluation and education management mode. Smart education technology as the key technology of education informationization was retracing education. Smart education technology was a new form of technology, participating in the change of future education. Technology and education need to continue to integrate into each other.

2. Management and guidance of Pigai automatic assessment system as a reference for offline management and guidance for development and management of smart education

It was proposed that information technology should be used in college English teaching and learning to enhance the teaching effect, so that English teaching was not limited by time and place, and developed towards personalized and autonomous learning in Teaching Requirements of College English Courses. As an important auxiliary tool in writing teaching, the online writing evaluation system has ten obvious advantages, but it cannot replace teacher evaluation. From the researcher's current use, there were still several problems in the correction network. First, the Pigai network provided more feedback on vocabulary and grammar, but less feedback on the ideological content, logic, and text structure of the composition. The feedback information was mostly suggestive and not specific enough. If teachers did not intervene and only relied on the system, it was difficult for students to improve their weak links. Second, students constantly revised and submitted their compositions according to the teacher's opinions and sentence comments in the system, but only the last article submitted was saved on the network, and students could not review their progress, which affected their learning effect.

Pigai network could provide students with timely and personalized correcting feedback, providing a choice for the implementation of integrating modern education technology into English

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

writing teaching and making up for the failure of the traditional composition correcting model to meet the needs of modern English teaching. The effective guidance and help of teachers in the process of using it was an important factor in ensuring the teaching effect. Luo Shasha (2020) concluded that Pigai.org did an excellent job of checking misspellings and inappropriate collocations, especially in Chinglish. However, the teacher's role in improving students' language quality cannot be ignored. The teacher knew the most appropriate word students were supposed to use, which was in line with their abilities. The use of information technology in college English teaching and learning could enhance the teaching effect, make English teaching not limited by time and place, and develop personalized and autonomous learning. As an important auxiliary tool in writing teaching, the online writing evaluation system had ten obvious advantages, but it could not replace teacher evaluation. Wang Xuemei et al. (2014) proposed the online grading system had played a positive auxiliary role in the teaching of writing.

The practice has also proved that only a combination of the teacher's guidance and systematic feedback could play an ideal role. The achievement of goals made a difference in learners' habits and behaviors. Teachers hear affirmations and negations of certain behaviors to determine whether some behaviors were repeated. Incentives, supervision, and other rewards and punishments combined to increase learning motivation, and strengthen the sense of competition, such as writing comments, recommending and displaying students' excellent works, supervising and even criticizing students who did not meet the requirements of learning, and gradually train students to make objective evaluation of themselves and improve self-reflection ability. The application of linear evaluation tools in writing teaching was a new teaching mode based on new network technology. Teachers should constantly learn new theories and strengthen the learning and training of new technologies. Teaching units should also provide hardware and software support to ensure the smooth development of teaching work. At the same time, the teaching monitoring of students' writing using an intelligent writing scoring system should be strengthened. Focusing on developing students' personalized learning strategies, respecting individual differences, teaching students according to their aptitude, and indeed improving their writing ability. An intelligent writing scoring system itself cannot guarantee the improvement of writing ability, we must have the students' conscious initiative, and true participation, and actively treat every practice opportunity. The effective guidance of teachers was also an important factor in ensuring the final teaching effect. In the process of college English teaching, teachers could effectively use this series of planning, guidance, inspection, evaluation, feedback, regulation, and other monitoring strategies, which could promote the cultivation of students' autonomous ability and finally enable them to have the ability of lifelong learning.

External monitoring included constraints and controls from teachers, peers, parents, and other external factors. As one of the important external monitoring factors, teacher monitoring was a strong guarantee for independent learning, a strong guarantee for teachers to enable learners to use the Internet for independent learning, and a series of processes in which teachers plan, guide, check, evaluate, feedback and regulate a series of activities of learners to use the Internet for independent learning. Therefore, according to the data provided by the evaluation system, teachers could feedback on the writing situation and make comments on the writing content of students from the structure of the text, the size of the vocabulary, the grammar structure, and the use of sentence types. Teachers should also make full use of various network tools, such as the question-answering board of the learning system, class communication forum, E-mail, etc., to solve students' problems in learning, provide homework feedback and diagnosis after evaluation, to help students adjust their learning strategies, correct mistakes in time, avoid learning blindness, and improved learning efficiency. Regulation was the teacher's adjustment and control of students' autonomous learning for learning.

The automatic essay scoring system greatly reduced the amount of teachers' composition correction, but there were still some problems, such as insufficient examination of the number of words in the composition, content correlation, and chapter cohesion, so teachers should judge and manually modify the parts marked "suspected errors" on the marking network to find out the common mistakes and individual differences of students. Comments on common errors with personalized guidance from teachers could make use of the statistical analysis of common weaknesses in the correction network to understand the common typical errors of students under the same essay subject and explain them in class in a concentrated way, such as big lowercase problems, misuse of punctuation marks, inconsistency of subject and verb and missing sentence components. Teachers could choose examples of typical mistakes for students to learn, identify, and correct. For the errors in the use of nouns, verbs, and adjectives, teachers need to give classified guidance to students and help them break through the difficulties in writing.

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

Because the technology of the automatic essay scoring system was not mature, the system sometimes only pointed out the grammatical irregularities in a general way and did not point out the specific problems, which led to a lot of confusion in the revision process of students, so teachers could help students specifically analyze vocabulary and grammar errors when correcting again, and gave reasonable and detailed revision suggestions. Students could get scores and general comments in time after correcting essays submitted online and correcting simple word spelling and vocabulary errors according to prompts. However, students were often confused about syntactic errors such as missing sentence components, double predicates, and conjunction errors, which required teachers to pay attention to textual cohesion coherence, and syntactic structure in the process of manual correction. In English writing teaching, teachers should guide students to establish a sense of discourse, organize the structure of the article, list the topic sentences and keywords, and add logical conjunctions that indicate the relationship between sentences, such as parallelism, progression, conversion, causation, etc. Based on ensure the logical structure of the article, they should add more details and other sentence components according to the requirements of the topic. At the same time, teachers should urge students to strengthen the analysis of sentence components and the memory of word collocation when reading excellent English compositions, to help avoid Chinglish expressions and cultivate their English writing thinking.

Although the automatic essay scoring system was conducive to the collection and analysis of students' corpus, its scoring system needed to be further improved. Teachers also needed to explore new application ways in writing teaching and promote the reform of the college English writing teaching model. Teaching and management should not only make corresponding changes according to the development of technology but also keep pace with the Times, to better teaching

3. Cultivating students' independent learning ability in the context of smart education technology.

The Pigai network indirectly cultivated students' ability to independent learning. The number of times that students used the correcting network to revise their compositions reflected their ability to learn independently. During the experiment, the communication with students revealed that after using the correcting network for one semester, students made a transition from passive learning to active learning, and their ability to learn independently also increased with the increase in the frequency of use. Independent learning ability improved significantly. At the same time, a small number of students also appeared in the process of using the correction network easily to distract their attention, resulting in an inability to focus on the completion of English writing tasks. Improve students' English writing ability. The automatic scoring system effectively made up for the problem that the traditional teaching grading was not timely. After students used the Internet for grading in one semester, the overall writing performance had been improved significantly, which helped students improve their English writing performance and improve their writing ability. Moreover, the study found that with the increase in students' revision times, their performance improved more significantly.

The online scoring system aroused their enthusiasm for independent learning, aroused their enthusiasm and interest in writing, and enhanced their self-writing efficacy. When students take their compositions to the teacher for correction, they might be in a nervous mood and worry that their compositions will be harshly commented on by the teacher. However, the online scoring system relieved these emotions and enabled students to write on their own initiative. I took the initiative to submit, which improved my confidence and interest in writing. From the post-test data, the number of students' independent revisions of articles had increased to different degrees, indicating that students' independent learning ability was constantly enhanced.

To crack back to major theoretical and practical problems, several issues need to be addressed. English teaching management was an essential part of the learning process Link. According to the learning strategy theory metacognitive strategies or management strategies were dominant in all learning strategies. It could be said that the effectiveness of learning depended to a certain extent on whether management methods were used and how well they were used. English teaching management was the application of management in the field of English teaching. It was both the practice of English teaching and the theoretical summary of English teaching management. English teaching management comes from English teaching practice. Managers and teachers accumulate management and teaching experience in teaching practice and summarize the general experience into the scientific method of teaching and management and use it as practical guidance. English teaching management

It not only had a complete subject content and system but also promoted the development of English teaching in all aspects. The English teaching management mentioned here included three aspects: First, the management model established according to linguistics, pedagogy, management, and

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2024.3595

other related disciplines. Second, school organizational structure organizational culture information transformation teacher management. The third is the English teaching process program designed and developed teaching evaluation and testing means. To improve the quality of college English to make our college English teaching meet the needs of the development of a new century not only had advanced teaching methods and teaching theories but also had a scientific teaching management system that conformed to the actual situation of our country. Therefore, it was far from enough to emphasize only the research on teaching methods Emphasis should also be placed on the organization and management of English teaching. In the case that traditional teaching methods had been deeply rooted.

A complete autonomous learning system was not an easy task. Firstly, we should set up independent learning centers, which means buying a lot of learning materials and language-learning equipment. To ensure normal operation there was also staff including consultants' administrators' technicians and assistants. Some schools also made central learning part of student assessment to increase the utilization of learning centers. Second, teachers also needed to adapt to new teaching tasks like organizational autonomy. Writing materials and participating in research projects related to self-directed learning. However, our college English teachers had not completed the transformation of teachers' roles in the classroom due to many objective factors. Third, other basic teaching organizations also needed to be established to complement the whole autonomous learning system. This was an important part that was lacking in college English teaching at present. Language teaching was relatively isolated in most colleges and universities. The form of organization was also based on a single classroom teaching that lacked teaching auxiliary organization and facilities. The key to the construction of an autonomous learning system was each organization in the system.

It was true that everything had advantages as well as disadvantages. Only by combining smart education technology proper guidance and effective management can we exert the power of modern technology.

Recommendation

1. Management and supervision are necessary in online learning

Both education and technology served the development of human beings, and human beings were the subject of educational activities and technical activities. As a new form of education, intelligent education came from the integration of technology and education. The most fundamental reason for the integration of the two was that they both took people as the purpose of their activities and promoted the development of people. Both education and technology were human-centered, and people were the bridge connecting the two. With people's growth and development as the goal, people's growth and development should be the inherent requirements of wisdom education. To develop wisdom education, we should correctly grasp the relationship between technology and education. Technology was the basis for the development of smart education. Without the support of science and technology, an intelligent education environment, interactive education mode, and accompanying learning systems would all become castles in the air. However, attaching importance to technology did not mean blindly following technology. Based on fully understanding its instrumental value, we should return to the essence of education activities, take people as the center of wisdom education, take promoting people's growth and development as the goal, grasp the subjective position of people (rather than technology), and truly realized the people-oriented goal of wisdom education.

2. Application of smart education technology to cultivate students' independent learning ability

In the 21st century, science was developing rapidly, the amount of information was growing geometrically and constantly updated, and independent learning ability would become the requirement and inevitable trend of social development. If people want to survive and develop in the information society, they must actively master self-study methods, learn high-quality ways and skills to acquire knowledge, cultivate self-learning ability, make self-study a habit of college students, and make college students develop the habit of lifelong learning. Cultivating and improving independent learning ability was not only the core requirement of lifelong learning ability but also the trend and ultimate goal of educational reform. The network provided a platform for college students to self-study. The development of network technology was breaking through the limitations of time and space, and giving full play to the advantages of computer networks such as openness, synchronicity, interactivity and large amounts of information could promote the improvement of college students' learning ability. This

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: https://doi.org/10.60027/ijsasr.2024.3595

International Journal of Sociologies and Anthropologies Science Reviews
Volume 4 Issue 1: January -February 2024: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: **https://doi.org/10.60027/ijsasr.2024.3595**

paper expounded on the methods of cultivating self-learning ability from the aspects of cultivating self-organizing ability, building a network learning atmosphere, learning to identify useful information, improving knowledge screening ability, etc., which was of great significance and reference significance for college students.

3. Methods to improve the effects of smart education technology

To promote the reform of college teaching under the background of smart education technology, we should first reform the traditional teaching mode and teaching management strategy, make full use of smart education technology to assist teaching, stimulate students' learning enthusiasm, and cultivate their independent learning ability. Only in this way could high-quality talents with independent learning ability be provided for the development of globalization in our country.

References

Attali, Y. (2004). *Exploring the Feedback and Revision Features of Criterion*. The National Council on Measurement in Education, Annual Meeting, San Diego, CA.

Cai, X. (2014). *To Explore the Cultivation of College Students' Self-Learning Ability Under the Network Environment*. Science & Technology Vision.

Chen, L. et al. (2016). *Technology Application of Big Data in Smart Campus*. Economic and Trade Practice.

Grimes, D., & Warschauer, M. (2008). Learning with Laptops: A Multi-Method Case Study. *Journal of Educational Computing Research, 38*, 305 - 332.

Luo, S. (2020). *Research on the Construction of Teachers' Role in the Intelligent Age*. Thesis Doctor (Theory of Curriculum and Instruction) Hebei: Hebei Normal University of Science & Technology. Shanxi: Northwest University.

Wang, X., Lou, R., & Luo, L. (2014). *Application of an Online Scoring System to assist English writing teaching*. China Educational Technology & Equipment.

Xu, X, & Mi, X., (2019). Research on the Application of Online Essay Automatic Evaluation System in English Major Writing Teaching – A Case Study of Pigai Network, *Journal of Changchun Education Institute*.

Yang, J., Shi, G., Zhuang, R., Wang, Y., & Huang, R. (2021). *5G+Smart Education: Educational Reform Based on Intelligent Technology*. China Educational Technology.

Zhu, Z.T. and Bin, H. (2012). Smart Education: A New Paradigm in Educational Technology. *Telecommunication Education*, 12, pp.3–15.

Zou, S. (2019)**.** *An on the Pigai Application Study on Automatic Evaluation System (AES) in English Writing Teaching of High School: Based System*. MA (Subject English): Suzhou: Jiangsu University.

Citation
Luo, F., Kalyanamitra, K., Niyomyaht, S., & Siriphornwut, N. (2024). Development Administration of Smart Technology of Pigai System. International Journal of Sociologies and Anthropologies Science Reviews, 4 (1), 93-102; DOI: **https://doi.org/10.60027/ijsasr.2024.3595**