



Research on the Reform of English Teaching in Primary and Secondary Schools and Teachers' Response Strategies in the era of digital intelligence

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ABSTRACT

In recent years, China has attached great importance to high-tech research and development and the development of the education sector, especially for the primary school field continues to carry out the "double reduction" policy and the recent "Internet +" trend of dual guidance, but also for primary and secondary schools in the English language subject to carry out a targeted Guidance. In the new era of the gradual implementation of the new curriculum reform policy, innovative teaching concepts and improved teaching quality have become the requirements of modern teaching. With the integration of digital technology into classroom teaching, higher requirements have been placed on teachers' teaching. The innovation of teaching puts teachers in a situation of both opportunities and challenges, and they should use equal communication and co-operation to promote students to build up their own knowledge structure, which enriches the teaching materials and the teaching mode, and strive to upgrade the English teaching to the level of digital intelligence. The use of these new teaching modes will help students learn according to the development trend of the modern society, as well as to innovate teaching concepts and quality with the help of digital technology.

Keywords: mathematics and intelligence; English; classroom teaching reforms

INTRODUCTION

Curriculum reform has brought new challenges and tests to English teachers in primary and secondary schools. Many teachers do not own an in-depth understanding of the new version of the textbook, resulting in poor overall classroom teaching [1-3]. Therefore, frontline teachers must quickly master the educational informatisation strategy of primary and secondary school teaching in the era of big data. Under the background of education informatisation, primary and secondary classroom teaching not only needs to collect teaching resources from different perspectives, but also focuses on cultivating students' ability to analyse and solve problems independently, so that they can explore and think independently. By searching for relevant information on the Internet, organising and retrieving it, students' hands-on skills are cultivated so as to improve their overall quality. Under the background of education informatisation 2.0, with the rapid development of information technology and the popularity of intelligent terminal devices, the "smart campus" is gradually illuminated into reality from the idea [4-6]. The implementation of digital intelligence teaching mode can quickly promote students' interest and concentration in English learning, comprehension of knowledge, and will also help students to develop their professional core qualities. Teachers need to ensure that the specific teaching is relevant to the students' learning situation and their developmental needs. Students' thinking patterns will also be innovative, reflecting the state of mathematical and intellectual learning. Teachers' own professionalism is directly related to the effectiveness of teaching quality, so teachers should optimise and upgrade their knowledge system as soon as possible. If the specific learning process is in the superficial stage for a long time, it is difficult to ensure the obvious improvement of learning effectiveness [7-9].

Through effective digital applications, educators will be able to create more practical opportunities for students to help them better master language skills and realise the true value of language learning [10-14]. Under the wave of education digitisation, we must realise that this is not only an era of technological innovation, but also a period of construction of brand new educational concepts [15-18]. In this context, a more interactive, personalised and efficient English learning environment will be gained with the

help of advanced AI technology (Fig.1). The use of advanced AI tools will be an unmissable opportunity for educators who wish to improve teaching quality and student engagement. Let's embrace this wave of educational change and work together to promote effectiveness of English language teaching.



Fig.1 AI technology

1 MOTIVATION FOR THE CHANGE OF ENGLISH CLASSROOM TEACHING STYLE IN PRIMARY AND SECONDARY SCHOOLS IN THE CONTEXT OF DIGITAL INTELLECTUALISATION

Once upon a time, "a piece of chalk, a blackboard" is the oldest and most traditional teaching media in the process of school education and teaching, which is simple, economical, and has played an indispensable role in the development of education and teaching. With the progress of society, the development of information network technology, the arrival of the age of digital intelligence, advanced, diversified, visualisation of the teaching media gradually into the public eye, its intelligent, digital features and characteristics of modern education and teaching injected a new vitality, and the traditional media of teaching and learning media to assume the role of the teaching medium. The intervention of new teaching media has changed the traditional teaching environment and the way of existence between teaching elements, whether it is the teaching object, the teaching content, the teaching means, or the teaching method, all of them present new characteristics of the times. Therefore, as far as English teaching in primary and secondary schools is concerned, the traditional way must be changed in order to match with the modern, digitalised and diversified teaching media, and to make English teaching in the basic education stage conform to the requirements of the development of the times.

2 RATIONALE FOR MATHEMATICAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING

In the context of the new course, English teaching in primary schools pays more attention to cultivation of students' language ability and the enhancement of their English ability in practice. The teachers are no longer the main body of teaching, but the guides and guarantors of students' study, and they pay more attention to the students' sense of experience, participation, and creativity, and adopt teaching modes and teaching methods in line with actual situation of the students. To strengthen teacher-student interaction and enhance students' learning enthusiasm, teachers will change teaching concepts and optimise the interaction mode, strengthen students' understanding of what they have learned, continuously improve students' comprehensive English literacy and promote students' sustainable development. English teaching implements the overall teaching of large units, but whether it is the overall framework of the unit or the teaching of the classroom, it is necessary to have the support of the students' learning activities, focusing on unit learning and promoting the achievement of unit goals, so the learning activities should reflect the integration and depth of the learning activities. It is difficult to achieve this kind of classroom sublimation with traditional duckling teaching, but with the help of the intelligent platform, teachers will be like a tiger with wings. But the premise of a well-prepared lesson is that teachers can be in accordance with the course standards in accordance with the different grades of students in different designs, different types of lessons for a variety of hierarchical design.

In the lower level listening and speaking lessons, students can make initial use of learning strategies and language skills, ability such as speaking, reading, listening, viewing and writing within the proposed thematic scope, around relevant thematic clusters and sub-themes, and in accordance with the prescribed content requirements of linguistic and cultural knowledge, perceive different linguistic and cultural phenomena based on the types of discourse prescribed by the content requirements of

the first level, and acquire basic information and communicate briefly with others. information, communicate briefly with others, have a preliminary sense of problem, try to reflect on learning, actively participate in classroom activities with curiosity about English learning, and be willing to cooperate and communicate with classmates.

In the listening and speaking lessons at the upper level, students are able to use language skills and learning strategies such as listening, speaking, reading, viewing and writing effectively in the context of relevant thematic clusters and sub-themes in accordance with the content requirements of linguistic and cultural knowledge, understand different linguistic and cultural phenomena and compare the similarities and differences of information in the context of the content requirements at the L2 level, in the context of the language skills and the grading scale of the academic standards. They can understand different linguistic and cultural phenomena based on the types of discourse specified in the L2 content requirements, compare the similarities and differences of information.

3 STRATEGIES FOR THE REFORM OF ENGLISH CLASSROOM TEACHING IN PRIMARY SCHOOLS IN THE CONTEXT OF DIGITISATION

3.1 Building a co-operative community

The building of a community of cooperation requires action based on substantive rationality, and differences must be accommodated while at the same time being transformed into a driving force for cooperation. At the level of the idea of a community of cooperation, differences should be a direct factor in communication and cooperation and should not be identified as an obstacle. The full implementation of the idea of co-operative community can make differences understandable and compatible, harmonise the problems that exist, and focus on equal communication as an alternative to full control. Synchronised development will enable teachers' English language teaching process to further reflect the development of digital intelligence, and collaborative community thinking is very effective in the development of teachers and facilitates the synchronised development of teachers. Before the establishment of the mathematical and intellectual thought pattern, teachers were equipped with similar teaching programmes. In the activity sessions within the school, the conceptual articulation between teachers has contributed to a significant enhancement of the effectiveness of the quality of their teaching. It can be said that the establishment and implementation of a collaborative community of practice can enable primary English teaching to move rapidly to the level of digital intelligence and to reflect a highly effective development.

3.2 Reclaiming Student Subjectivity

In order to ensure that students can independently establish a highly feasible learning method, the correct guidance of the teacher should be a prerequisite. It can be seen that the significant effect of the teacher's guidance in the classroom will also fully reflect the teacher's professionalism, which must be gradually strengthened in teaching activities that focus on the subjectivity of students' knowledge explorers. There is a clear difference between modern Maths and Wisdom teaching and previous teaching, the Maths and Wisdom classroom deepens students' understanding and identification of culture, both of which bring about a cultural clash of cultural subjects. For this reason, efforts should be made to resolve this cultural conflict in a balanced way, exploring modern learning models and synthesising multiple aspects of teachers' and students' learning activities to meet students' learning needs. In the context of the information age, high-frequency innovations in digital intelligence technology will facilitate students' learning of cultural knowledge in multiple specialisations, as well as the traditional cultures of multiple countries. Teachers need to effectively use new digital technology and intelligent terminal equipment to help students improve their professional skills and core qualities, so that students can effectively demonstrate their professional potential and accept the cultural elements of the digital thinking mode. Differences between students make it difficult for teachers to organise the teaching content in a way that is relevant to the students' learning situation and their developmental needs, making it difficult for students to make clear the significance of their learning. Therefore, under the Numeracy Mindset, teachers should encourage students to choose appropriate learning contents and methods, taking into account the developmental needs of students and their acceptance speed.

3.3 Innovative educational models

In the age of information technology, digital intelligence is the basic mode of modern teaching and learning, and overall adjustment is the first priority to ameliorate the coordinated development process of teaching and learning. With long-term development as the goal, optimise and upgrade the teaching mode. With the help of material introduction, equal communication, mutual promotion, help the smooth implementation of compulsory education. Teachers need to establish a mathematical and intellectual thinking and teaching mode, the true meaning of teaching is the process of information transfer. Teachers should moderately encourage students to actively collate and analyse the new information to sum up the fun and meaning of learning. For example, for "SEASONS", teachers need to give the images in the form of microcourseware with the regional customs and humanistic feelings of Australia. The time difference between Australia and China is only 2 or 3 hours, but its four seasons are diametrically opposed to China, for example, when China is in the freezing cold of winter, Australia is hot in the summer, the content of this distinctive presentation of courseware can make students broaden their knowledge horizons, and the students in the long-term learning of this diversified content will deepen their understanding of the English classroom knowledge to ensure that they achieve the purpose of learning and applying it to their own purposes. Strengthen the practical ability of knowledge and help students to develop their core qualities. Under the guidance of the idea of digital intelligence, students will also combine their own preferences, learning conditions and other objective conditions to establish a learning method conducive to their own development, and to establish a perfect knowledge structure with a high degree of guidance significance. This should also be done by the teacher with digital technology and intelligent terminal equipment, micro courseware, etc. as a prerequisite, to create a learning environment that can stimulate students' digital thinking. Only in this way will it effectively promote the rapid upgrading

of English teaching to the level of digital intelligence. We will fully integrate the digital intelligence model in our thoughts and actions, and at the same time transfer this model to our students to help them form the habit of actively exploring knowledge and strengthening the skills of expanding the use of English knowledge. As we can see, students are the inheritors of culture and the leaders of new ideas.

3.4 Reasonable positioning to assist classroom teaching

The rapid development of digital technology, multimedia technology has been continuously updated, a variety of emerging technologies in multimedia technology is more and more widely used. Comprehensive use of video, pictures, text, sound and VR technology, can create a good teaching situation, fully stimulate the interest of students, make some abstract knowledge become more graphic, vivid, break through the teaching of the key points. For the majority of teachers, they should be aware of the many changes brought about by the current digital technology, while combining the relevant requirements of the new curriculum reform, accurate positioning of the multimedia classroom status. Specifically, in primary school English teaching, students are mainstay of teaching and learning, teachers should play the roles of English literacy developers, student activity guides, teaching activity organisers, and teaching situation designers; multimedia is an auxiliary tool for designing teaching situations, organising learning materials, cultivating students' English literacy and promoting teacher-student cooperation. For primary school English teaching, no matter what advanced multimedia is chosen, it cannot replace traditional teaching, but it is necessary to implement a reasonable positioning of multimedia and further clarify its auxiliary function.

3.5 Creating Contexts to Mobilise Interest in Learning

As we all know, "interest is the best teacher for students", only full of strong interest in learning can effectively guarantee the efficiency and quality of learning. From the traditional English classroom and the English classroom in the multimedia era, students are always in a passive learning state, and it is obviously difficult to mobilise students' interest in learning through boring and monotonous text, demonstration and writing. But through the digital intelligence technology to create the corresponding situation, the knowledge will be transformed into an image, vivid, novel, intuitive situation, and at the same time to guide the students to interact with the students, the students auditory, visual double stimulation, to help students to create the feeling of immersion, naturally, can be fully mobilised the interest of the students.

For example, for "Shopping at the supermarket", teachers can make a video in advance to show the scene of supermarket shopping. After students have watched the video, borrow VR equipment to let students experience the VR supermarket in person to help them feel the scene of supermarket shopping abroad. After completing the creation of the situation, let the students simulate the supermarket shopping situation in the video. Student A will play the role of Salesperson of supermarket, Student B acts for Cashier, and the rest of the students play the role of Consumer. A student walks into the supermarket from the outside and asks Student A: "How much is the apple?" and Student A introduces it enthusiastically: "There are apples, 5 yuan ." After the student chooses the apple, he goes to the cashier to check out, and Student B receives him enthusiastically: "Sir/miss, is that all?...yuan, please. "Each student chooses a different commodity separately, while trying to swap roles to experience different roles based on the creation of the situation, so that students simulate familiar scenes in life, so that the students change into the main body of learning, students in the process can be better imitation, while effectively exercise the students' English application skills.

3.6 Interaction outside the classroom to expand the scope of teaching and learning

The primary English classroom under the background of digital intelligence attaches more importance to teaching interaction, which should not be limited to the classroom, but also needs to be extended to the outside of the classroom, so that teachers and students can maintain good contact with each other. This requires primary school English teachers to make full use of the current digital intelligence technology, take the initiative to build a colourful interactive platform, so that interaction can really penetrate into the students' life and learning. Colourful primary school English teacher-student interaction platform can provide teachers and students with more opportunities for teacher-student interaction and communication, so that teachers can effectively familiarize and understand the specific learning, in order to make appropriate adjustments to the teaching methods and progress, so as to ensure the overall teaching quality.

For example, primary school English teachers tried to use the current popular QQ, WeChat and other social software to establish an interactive platform, the use of QQ groups, WeChat public number, etc., so that primary school students can effectively get rid of the serious and monotonous environmental constraints of the traditional teaching process, and be able to carry out free and democratic exchanges and interactions in these platforms, and can also use the group leader anonymous voting to allow students to evaluate and put forward corresponding comments on the teaching methods of the teacher. Evaluation, and put forward the corresponding comments, so that teachers can understand the students' real ideas in a timely manner, the teaching method for timely improvement and optimisation, to ensure that the teaching methods and progress can be better adapted to the actual situation of the students in the class, as far as possible to take care of each and every student.

4 CONCLUSION

Under the conditions of the new curriculum reform, which focuses on digital teaching, the state of students' distracted concentration and passive learning will be further highlighted. Based on this situation, teachers need to take effective measures to promote students to change this attitude while upgrading the previous teaching mode of numerical intelligence, and then strive to achieve the purpose of improving the mental outlook of students. In order to ensure that a holistic approach to effective learning is reflected, further attention needs to be paid to the innovation and high quality of Maths and Intelligence teaching. To ensure that students' attitudes to study English will be optimised, and at the same time to ensure that they can promote student

development.

REFERENCES

- [1] Shi Dandan. Strategies of English Phonetic Teaching in primary schools under the background of "human computer dialogue". *Contemporary Family Education*. 2021, 6, 179-180.
- [2] Zheng Jiejing. Research on Development of English Teaching Video Mode in Primary and Secondary Schools in Era of Education Informatization 2.0. *Journal of Ningbo Institute of Education*. 2024, 5, 125-129.
- [3] Wu Yuanqing. The Strategies of Improving the Quality of English Teaching in Primary and Secondary Schools in the Context of "Double Reduction". *Journal of Hubei Adult Education Institute*. 2024, 4, 51-56.
- [4] Shi, LN. The Applicability of Multimodal Education in Higher Vocational English based on Analysis of Nonlinear Psychology in the Electronic Commerce Environment. *REVIEWS OF ADHESION AND ADHESIVES*. 2023, 11(2), 281-297.
- [5] Akiba, M and Liang, GD. effects of teacher professional learning activities on student achievement growth. *JOURNAL OF EDUCATIONAL RESEARCH*. 2016,. 109 (1) , 99-110.
- [6] Başaran, S. A descriptive analysis and classification of drama techniques for language teaching. *Shanlax International Journal of Education*. 2024 *Shanlax International Journal of Education*. 2024 , 12 (2), 8-19.
- [7] Baykal, N., Sayın, İ., Zeybek, G. The views of ELT pre-service teachers on using drama in teaching English on their practices involved in drama course. *International Journal of Contemporary Educational Research*. 2019, 6 (2), 366-380.
- [8] Deregozu, A. Foreign Language Teacher Competences: a Systematic Review of Competency Frameworks. *Ankara University Journal of Faculty of Educational Sciences (JFES)*. 2022, 1 , 219-237.
- [9] Chen, Q., Clare, W. (2017). Contextualisation and authenticity in TBLT: Voices from Chinese classrooms. *language Teaching Research*, 21, 517-538.
- [10] Al-Ajmi, N.H., Aljazzaf, Z.M. Factors influencing the use of multimedia technologies in teaching English language in Kuwait. (2020). *International Journal of Emerging Technologies in Learning*, 15 (5), 212-234.
- [11] Mohammadipour, M., & Rashid, S. M. (2015). The impact of task-based instruction programme on fostering ESL learners' speaking ability: a cognitive approach. *advances in Language and Literary Studies*, 6(2), 113-126.
- [12] Chen, L., Feng, T., Fan, D. Construction of a sharing model for network digital teaching resources oriented to big data. (2020) *International Journal of Continuing Engineering Education and Life-Long Learning*, 30 (2), 190-203.
- [13] Cong, R., Zhao, Z., Min, G., Feng, C., Jiang, Y. EdgeGO: A Mobile Resource-Sharing Framework for 6G Edge Computing in Massive IoT Systems.(2022) *IEEE Internet of Things Journal*, 9 (16), 14521-14529.
- [14] Bautista Garcia-Vera, A. Functional Resignification and Technological Innovation as a Digital Teaching Competence. (2021) *Revista Iberoamericana de Tecnologías del Aprendizaje*, 16 (1), 93-99.
- [15] Gómez-Trigueros, I.M. Digital Teaching Competence and Space Competence with TPACK in Social Sciences.(2020) *International Journal of Emerging Technologies in Learning*, 15 (19), 37-52.
- [16] Qian, L., Perez, Z. An intelligent evaluation model of bilingual teaching quality based on network resource sharing . (2020) *International Journal of Continuing Engineering Education and Life-Long Learning*, 30 (2), 148-160.
- [17] Dan, Z. Online learning platform and innovation of English teaching model based on students' foreign language learning ability in independent college.(2017) *Boletin Tecnico/Technical Bulletin*, 55 (6), 670-677.
- [18] Liang, X., Pang, J. An innovative English teaching mode based on massive open online course and Google collaboration platform.(2019). *International Journal of Emerging Technologies in Learning*, 14 (15), 182-192.