A Review of English Teaching Strategies Supported by Information Technology

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Abstract. The widespread adoption of information technology has enhanced the efficiency and quality of English teaching. particularly in the areas of listening, speaking, reading, and writing. The rapid development of contemporary information technology has introduced innovative instructional models and pedagogical approaches. However, how to effectively utilize information technology in English teaching remains an area worth exploring. This paper reviews existing literature to examine the current applications, benefits, and limitations of technology-supported English teaching. It analyzes and summarizes comprehensive and detailed strategies for English teaching, aiming to promote the deep integration of English teaching with intelligent technology. Additionally, the paper explores the potential challenges and areas for further research in English teaching supported by information technology.

Keywords: Information Technology; English Teaching; Teaching Strategy.

1. Introduction

English, as the predominant international language in today's world, has a significant impact on international communication. In China, a growing number of learners are studying English, prompting ongoing research into how to leverage modern information technology to enhance teaching effectiveness. With the rapid advancement of information technology, the methods of English teaching are constantly evolving and updating. A substantial body of research has emerged on technology-assisted English instruction, focusing on the application of multimedia information technology, the creation of smart classrooms, the transformation of interactive models, and the upgrading of teaching strategies. This paper reviews recent literature on information technology-assisted English teaching, summarizing the research content and progress in recent years. It aims to identify more effective teaching strategies supported by information technology, helping educators integrate modern tools into their instructional practices. By promoting the deep integration of technology and pedagogy, this study seeks to improve the overall quality of English instruction and boost learning efficiency.

2. Literature Review

2.1 Applications and Advantages of Information Technology in English Teaching

2.1.1 Applications of Information Technology in English Teaching

In modern English teaching, common applications of information technology include include multimedia teaching tools, online learning platforms and resource libraries, artificial intelligence and adaptive technology, virtual reality and augmented reality technology, social and collaborative tools, as well as data analytics and teaching management systems.

Among these, multimedia teaching tools include multimedia courseware, online audio materials and voice tools (such as "Oral 100" and "English Fun Dubbing"), and video teaching platforms (like YouTube Education Channel and TED-Ed). Online learning platforms and resource libraries include MOOCs and intelligent learning systems like Learning Management Systems (LMS), as well as specialized repositories such as Memrise, Grammarly, Newsela, and Turnitin, which focus on

vocabulary, grammar, reading, and writing. Artificial intelligence (AI) and adaptive technologies include AI voice assistants and dialogue systems (such as Siri, Xiao Ai, and Oral Hero), as well as adaptive platforms like Knewton and Squirrel AI. AI voice assistants and dialogue systems analyze students' oral pauses and grammatical errors to generate weakness reports and recommend targeted exercises. Adaptive platforms use data visualization charts (such as vocabulary mastery curves and error rate trends) to help students and teachers identify issues. Virtual reality (VR) and augmented reality (AR) technologies can be used to create immersive language environments. Social and collaboration tools include international platforms like 'PenPalWorld' and 'HelloTalk,' as well as live meeting platforms such as 'Tencent Meeting' and 'Zoom.' The 'Weike' platform, including 'NetEase Cloud Classroom,' offers 10–15-minute bite-sized courses that are ideal for students to learn on their schedule. These tools facilitate cross-cultural communication and team learning. Data analysis and teaching management tools can optimize teaching strategies and assessment systems. Teachers can adjust the focus of their lessons based on data from the platform's backend. The platform can recommend resources tailored to students' learning habits (for example, prioritizing English animations for visual learners). Automatic scoring systems for English compositions, such as 'iWrite,' evaluate content logic, grammatical accuracy, and vocabulary richness. Oral exams can be scored using AI.

2.1.2 Advantages of Information Technology in English Teaching

Compared with the traditional language teaching classroom, there are many obvious advantages in the English classroom teaching assisted by information technology.

On one hand, information technology can empower the entire teaching process for teachers. By effectively utilizing information technology, teachers can make their lessons more engaging and lively, which helps to spark students' interest [1]. Internet technology not only provides real-time feedback and assessment for teachers [2] but also facilitates remote teaching and resource sharing [3]. With the support of information technology, teachers can design personalized lessons, prepare more comprehensive materials, expand teaching resources, and create hybrid online-offline classrooms [4]. Through educational platforms like the National Smart Education Platform for Primary and Secondary Schools and TeachersPayTeachers, teachers can directly access high-quality lesson plans, interactive PPT templates, and film materials (such as English clips from "Frozen" for situational teaching), reducing the time spent on repetitive production. Specifically, in an English class supported by information technology, teachers can create various scenarios to aid student learning. For example, they can use intuitive scenarios to introduce the lesson; problem scenarios to create suspense; story scenarios to immerse students in roles; activity scenarios to stimulate interest; and life scenarios to encourage association [5].

On the other hand, for students, information technology can transform the learning experience. With IT support, English instruction can offer an intelligent and highly interactive online learning platform. This platform provides feedback to students and facilitates smart interactions. More importantly, it creates a space for communication among teachers, students, administrators, and researchers [6]. Students can now learn anytime and anywhere, with their learning settings and schedules being more flexible. With ample IT support, students can engage in self-directed learning, adjusting their content based on personal interests, which enhances learning efficiency. Additionally, this approach helps develop students' skills in independent thinking and problem-solving [1].

For teachers, information technology acts as an 'intelligent assistant' to enhance teaching precision, making lesson preparation, teaching, and assessment more efficient. For students, it serves as a 'universal tool' to expand the boundaries of learning, transforming language learning from a 'task' into an 'experience.' Through technology, both parties engage in a positive interaction: teachers use data to refine their teaching strategies, while students benefit from personalized support, thereby enhancing their learning efficiency. Ultimately, this leads to an upgrade in English teaching from 'knowledge transmission' to 'ability development.'

2.2 Current Status and Challenges of Information Technology-Assisted English Teaching

Although information technology has been basically used to assist teaching in the current English classroom, the expected teaching outcomes are often difficult to achieve in actual practice. This situation calls for reflection on and further study of existing English teaching strategies.

Recent studies indicate that the current state of English teaching supported by information technology is not very satisfactory. Specifically, the integration of information technology with English instruction lacks sufficient depth. Some learning websites merely replicate textbook materials without innovation, while others, while reducing teachers 'workload, increase students' learning burden [6]. Moreover, there is a conflict between teachers' instructional philosophies and the technology they use: teachers accustomed to full-class lectures find it difficult to adapt to flipped classroom designs (such as requiring students to watch micro-lessons before class), This frequently results in poorly produced micro-lessons and uninspiring classroom discussions. Additionally, some teachers perceive technology merely as a tool to replace PowerPoint presentations and fail to fully leverage its interactive capabilities. In practice, many teachers use information technology only for basic course software applications [1].

While the application of information technology in English teaching brings numerous advantages, it also faces multiple practical challenges. These challenges involve technical adaptation, transformation of teaching models, and resource allocation. For instance, some regions lack adequate electronic equipment and technical support: rural schools may face a situation where there are no devices available (for example, a middle school in a town in Guizhou Province has only three old computers for 50 students), while urban schools, despite having multimedia classrooms, suffer from 'idle equipment' (for example, a projector with insufficient resolution causes text to be blurry). When students study at home, some areas have insufficient network bandwidth (for example, downloading a 500MB English micro-lesson takes 20 minutes) or outdated equipment (for example, using an obsolete tablet to watch videos often results in lagging, causing 'online homework' to become a mere formality). Students lack good self-study skills and self-discipline [7]. For example, when students use tablets to complete English listening assignments, they might switch to social media chatting. Teachers lack the necessary technical literacy and innovation to effectively integrate information technology into English course teaching; students' actual IT application skills lack effective training and assessment [8]. Additionally, there are issues of copyright disputes and compliance: for example, teachers who use movie clips without authorization to create listening materials may face copyright complaints; a certain training institution was sued for 200,000 yuan in compensation for using pirated English learning software.

The challenges of integrating information technology into English language teaching fundamentally stem from the tension between “technology empowerment” and the “essence of education.” These issues range from hardware disparities to conceptual conflicts, requiring not only policy-level resource allocation (such as the 'Education Informatization 2.0' initiative, which supports rural schools), but also a transformation of teachers’ roles from mere technology users to educational designers. For instance, when using Zoom for online debates, the emphasis should be placed on guiding students to use English effectively to address the logical flaws of their opponents' arguments rather than simply focusing on the operation of the tool.

2.3 Strategies for Information Technology-Assisted English Teaching

2.3.1 Strategies at the School Level

First, school management should promptly upgrade and enhance the school's information infrastructure to ensure that teachers and students can conduct teaching and learning smoothly and efficiently [1]. On this basis, efforts can be made to build smart classrooms [4]: installing panoramic recording devices (to record students' oral practice), touch-enabled electronic whiteboards (to support real-time annotation of difficult points in texts), group discussion screens (for collaborative English poster creation), and establishing a 'cloud resource library': purchasing authentic resources from

FLTRP such as 'U Classroom,' categorizing them by textbook units, and allowing teachers to directly access accompanying micro-lessons, courseware, and test questions.

Secondly, schools need to optimize their existing English teaching staff, as teachers with a strong Western cultural background can help enhance students' overall English proficiency [9]. Additionally, schools should regularly organize IT seminars to provide teachers with the latest teaching resources and technical support, thereby improving their information literacy [10]. Schools can implement a tiered technical training program: new teachers must complete the "Basic Tools of English Teaching" module, while experienced teachers can opt for the "Advanced Application of AI Technology" module. At the same time, schools can hold seminars to deepen the study of relevant English teaching theories [9]. An often overlooked aspect is that the level of students' information literacy significantly impacts teaching quality, so schools should pay attention to the differences in student qualities and promptly improve their information literacy [3].

2.3.2 At the Teacher Level

Through the study of relevant literature recently, we can know that the effective English teaching strategies assisted by information technology can be divided into three corresponding strategies: before class, in class and after class.

Pre-class: Teachers should make decisions based on the actual teaching environment. Specifically, teachers should be familiar with traditional course schedules, teaching methods, and exam pressures, while also being well-versed in the available technological, linguistic, and cultural resources in the actual teaching environment. They should adjust the level and format of English classroom instruction to align with these resources [3]. Additionally, teachers should consider the students 'actual conditions to ensure that the teaching scenarios they create are suitable for students' physical and mental development, intellectual growth, and cognitive development, thereby aiding in the construction of their knowledge systems [5]. Teachers need to clearly define the goals of English teaching supported by information technology [3] before class, as clear goals can effectively prevent deviations in teaching outcomes. It is important to avoid formalism and overcomplicating simple issues [6]. Teachers should focus on designing different types of courses, such as listening and speaking classes, reading and writing classes, and review classes. Different types of English teaching courses require different, targeted teaching design plans. For example, in listening and speaking classes, apps such as *Oral 100* can be used to assign follow-along tasks that automatically detect pronunciation errors and provide feedback for improvement. For interactive speaking tasks, platforms like *Zoom* can simulate real-life scenarios—for instance, assigning students to role-play "dining at an overseas restaurant" in breakout rooms while the teacher monitors discussions in real time. In reading and writing classes, tools like *Notability* enable students to annotate digital texts by circling keywords and adding voice comments. Additionally, a *word cloud generator* can help visualize high-frequency vocabulary to guide theme identification. Across all course types, the teaching process should follow a structured sequence of pre-class preparation, in-class implementation, and post-class evaluation [11].

In class: First, teachers can fully utilize existing information technology tools for teaching. For example, they can introduce online learning platforms like [11] to help track students' progress, expand the content of English lessons [9], and adjust the teaching pace based on real-time feedback. They can also introduce intelligent auxiliary tools, such as language apps, software, and smart voice recognition technology, to enhance teaching quality. For modular knowledge points, micro-lessons can be created to facilitate students' learning during their free time. In certain scenarios, teachers can use augmented reality (AR) or virtual reality (VR) technology to create context-driven learning [12], such as using VR to help students practice speaking and AI to analyze writing weaknesses. Second, teachers can adopt a multi-interaction English teaching model, which includes teacher-student interaction, interactive sessions, and student-to-student interaction [13]. Finally, teachers can promote students' interest in English by incorporating related cultural knowledge, such as history, geography, economics, politics, and humanities [9].

After class: Teachers can upload course materials and key knowledge points to the Internet [6], making it easier for students to download and review. Teachers can use online learning platforms to provide intelligent grading of student assignments, offering personalized English learning guidance [2]. When students have spare time, they can utilize the platform's intelligent recommendation system to access learning resources tailored to their individual needs [2].

3. Discussion

Information technology-assisted English teaching offers numerous advantages, yet it also faces significant challenges. Specifically, the dominance of technical rationality in humanistic education is a notable issue. In many current English classrooms, the primary teaching methods have been largely replaced by auxiliary tools, which has weakened the teacher's guiding role [15]. While information technology (such as MOOCs and AI courseware) can efficiently convey standardized knowledge, if teachers reduce their role to merely' playing courseware + assigning exercises,' this approach may undermine the guidance needed for deeper knowledge internalization, such as analysis, critical thinking, and application.

With the aid of information technology, teachers and students have shifted from verbal to audio-visual communication, which has dampened students' enthusiasm for interaction. Multimedia presentations are typically displayed in a fixed sequence, leaving little room for student reflection. Cross-cultural understanding has become superficial, as seen in AR technology demonstrations of "British afternoon tea," which focus on visual presentation without delving into the underlying class culture behind the etiquette. This has led students to equate cultural studies with watching cartoons.

The widespread use of multimedia will increase the time teachers spend at the lectern, leading to a lack of face-to-face emotional interaction between teachers and students [15]. For example, while AI foreign teachers can correct pronunciation, they cannot capture students' emotional changes as human teachers can (such as by observing eye contact to gauge students' understanding of cultural nuances). In online English corners, students are more likely to interact using emojis rather than engaging in deeper discussions about literary works.

Meanwhile, with the aid of information technology, students are often exposed to excessive digital stimuli, making it difficult for them to maintain focus. Convenient online communication has, to some extent, reduced students 'opportunities to engage in offline activities. If students overly rely on online communication (such as social media and virtual chats), they might spend time that could be used for offline activities (like club activities, outdoor exploration, and hands-on projects) in front of screens. Moreover, online communication lacks non-verbal cues such as body language and eye contact, which are essential for developing social skills. Prolonged dependence on such interactions may contribute to a decline in students' real-world interpersonal competence. Therefore, greater attention should be paid to how educational guidance, self-regulation, and thoughtful technological design can transform online communication into a support—rather than a hindrance—for offline learning and development, fostering an integrated and balanced learning environment.

Moreover, it is undeniable that personalized learning may, to some extent, hinder students' social development [16]. In personalized learning, students often express their views through "bullet screen interactions" and "emoji expressions," rather than through face-to-face eye contact and body language. The "anonymous posting" and "free liking" rules in online learning communities differ from the "equal rights and responsibilities" and 'etiquette norms' in real society, which can lead to a sense of dislocation in students' real-life learning experiences.

4. Conclusion

The article reviews the literature on English teaching supported by information technology, outlining its advantages, current challenges, and practical strategies. It offers a new model of English teaching supported by modern information technology to teachers and educational administrators,

while also reflecting on the current drawbacks and challenges of such teaching methods. Through the synergy of technological empowerment and educational innovation, English instruction is evolving from one-way knowledge delivery to interactive learning, and from standardized methods to personalized approaches. Teachers can flexibly adopt tools based on student needs—for example, using VR for speaking practice or AI for writing analysis—while students enhance their language proficiency through diverse and dynamic learning environments. As technologies such as the metaverse enter the educational field, English teaching will continue to diversify. Striking a balance between the benefits and challenges of technology integration remains a key area for future research. Ultimately, effectively applying modern information technology in English education is essential to fostering students' language competence, promoting autonomous and engaging learning, and improving overall teaching quality.

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