

Multi-Intelligence English Teaching Model Based on Distance and Open Education

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ABSTRACT

Distance education between the student and the teacher through online sessions can make it difficult for a student who does not understand a concept to ask for clarification. Lack of a physical campus or social pressure from peers can demotivate students from completing their assignments. The framework of multi-intelligence English teaching based on cloud technology (MIET-CT) is introduced to solve these kinds of issues. The method of blended learning (BL) combines in-person instruction with digital resources to improve distance and open education by examining the efficacy of a learning strategy, with an emphasis on collaborative and autonomous learning (CAL) by artificial intelligence (AI). Cloud technology can potentially encourage students' independent learning as a cognitive tool by providing a cloud platform and multimedia instruction by domain modeling. As a result, various English teaching styles have been shown to increase student's motivation to learn and provide more impressive classroom results than conventional methods.

KEYWORDS

Distance and Open Education, English Teaching Model, Multi-Intelligence

Internet-based lectures are facilitated by technological means and presented to students at their convenience (Irfan et al., 2020). It is a plan to take advantage of the entire semester's course offerings (Rajabboyevna, 2020). Learning English as a subject or a medium of instruction is crucial to a student's whole education (Syakur et al., 2020). Among other reasons, English is taught to students at a young age because it serves as the language of many scientific disciplines, the medium of higher education, and the language of global communication (Dafouz & Smit, 2020). Although English is widely regarded as the international language (Rineksa & Muslim, 2020), students in countries where it is not spoken as the mother tongue often struggle to learn it. Network cloud technology is rapidly altering people's work, learning, and how they think and communicate, which presents a significant challenge to our educational system (Gheisari et al., 2021). Information is the driving force behind the global economic and social development agenda, with network and multimedia technology as its foundational pillars (Matkasimova & Makhmudov, 2020).

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Integrating technology into curriculum is most effective when guided by cutting-edge pedagogical ideas and theories, such as the leading subject approach to instruction (Redondo et al., 2020). Furthermore, these instruments find extensive use in the classroom as an amalgam of instructional materials, aspects, and layout. Education aims to foster students' creative thinking and practical skills, which can be done by optimizing the aggregation effect as a whole (Luhach et al., 2014). Optimization emphasizes a shift toward a more teacher-centered instructional structure and pedagogical approach (Niet et al., 2016). To build a more individualized and autonomous learning process, contemporary information technology should support the new education design, particularly network technology (Pustaka, 2020). To effectively apply the advanced theory to English teaching work in a region where minorities are a majority (Eshonkulova, 2020), an EFL (English as a Foreign Language), the instructor must give exceptional support services, reflect on blended theories, and create a good case study on student assistance (Bobojonova, 2020).

The development of new technologies has altered how students acquire knowledge compared to the olden days, with today's technological advancements giving agency to all classroom participants (Sung, 2020). Hence, online class technology greatly enhances the teaching approach instructors take (Hashemi & Kew, 2020). It is a great tool for boosting students' education. Teachers can use the application program to connect with and learn from the centers of knowledge (Cope et al., 2020). In addition, these media are not exclusive of one another; rather, they can and should be combined and used to maximize the learning experience and accommodate the diversity of learners (Garrido et al., 2015).

The goal of integrating cloud computing into curricula is not merely to use cloud computing as a teaching demonstration tool to teach subjects using cloud computing (Asmin, 2020). It needs to be emphasized as integrating the status's active factors to realize the information to complete the integration of the virtual and physical worlds' networks (Abenti, 2020). Many institutions in our country require their students to take a college English course, and while many instructors and learners put in extra time, effort, and credit toward the end, the results are not always as desired (Winarti et al., 2019). The goal of teaching English at the college level is that multi-intelligence exhibits feature like authenticity, situation, advancement, and diversity (Erlina et al., 2019). However, there are problems with the internet, the audio, the video, the environment, and the module instructor's voice quality, to name a few. Planning and technology training must be established to handle the problem of online teaching (Wiratna & Hamdiah, 2020). The discrepancies in scientific principles must retain the students' learning skills. Learning outcomes and interest can be improved significantly using integrated learning systems.

In the context of online education, MIET-CT technology addresses the challenge of students lacking effective learning strategies. This technology provides personalized learning strategies that are tailored to individual students based on their performance and needs. For instance, MIET-CT technology assesses a student's preferred learning style, level of knowledge, and areas of difficulty, then adjusts the teaching approach and curriculum accordingly. In addition, self-regulated learning assessment is incorporated in MIET-CT technology, which enables students to track their own progress, set achievable goals, and take responsibility for their learning process. This approach enhances the students' learning outcomes and fosters their independent learning abilities.

Blended learning combines traditional face-to-face instruction with online learning resources and tools. It has several advantages for English education, including providing more flexibility and opportunity for interactive learning, access to a wider range of learning resources, and better engagement and motivation among students.

The main contribution of this paper is given as,

- The purpose is to identify issues in remote lecture halls and incorporate data to improve education.
- The goal of enhancing online learning is to provide students the flexibility to study whenever and wherever they like without being tied to a physical classroom.

- The article analyzes incorporating the proposed MIET-CT strategy centered on self-regulated learning assessment, a unique teaching modality in artificial intelligence.
- The research will introduce novel ideas and highlight important considerations for revising the current approach to teaching English, which is essential for realizing the field's stated aims.

The rest of the paper is as follows: section 2 of the literature survey for an existing method of multi-intelligence English education, section 3 of the proposed method MIET-CT to be discussed, section 4 of educational analysis with experiments, section 5, the conclusion of the paper.

LITERATURE SURVEY

Moradimokhles & Hwang (2020) examined the impact of online and blended learning on the English language skills of nursing students. A few pupils participated and were assigned to random groups. Learning management systems (LMS) were designed to teach basic English in a virtual classroom. Exercises based on the tasks for enhancing general English skills were utilized to teach the control group's members how to communicate in English. The blended learning experimental group was taught available English using blended learning. Students then took a post-test designed to assess their overall grasp of the English language, and results showed that the mixed-learning group had fared better than the other two.

Siripongdee et al. (2020) elaborated on the qualitative research's central subject, Blended Learning based on the Internet of Things (BL-IoT). There are many resources available to learn more. The author used analysis and synthesis tables to facilitate the author's content analysis methodology. Blended learning is an instructional approach that blends in-person training and information and communication technology (ICT) instruction. In contrast, IoT-based technology is any heterogeneous items or devices connected to a network. Authors have implemented many IoT-based devices and things in the classroom to create and enhance a smart learning environment conducive to the pedagogical objectives.

Quvanch & Na (2020) suggested using a variety of technology, such as the blended learning approach, to address the challenges faced by students of English as a second language or English as a foreign language (ESL/EFL). The purpose of the article is to examine previous research on the topic of blended learning and its potential effect on students' writing skills. Twenty-five papers published in the form between 2010 and 2020 were selected using a systematic search approach (SSA). The majority of the research was conducted in Asian countries. Blended learning has been well-received in many ESL/EFL classrooms by both teachers and students.

Sujannah et al. (2020) discovered that some studies have shown that so-called blended learning, in which the internet is integrated into traditional classroom instruction, improves students' ability to express themselves in writing in English, a foreign language. However, so far, no studies have examined how incorporating Google Classroom (GC) into a student's education impacts their writing skills in EFL. Therefore, the research aimed to assess how incorporating GC into EFL classrooms affected student writing across a spectrum of student agencies. The study results showed that the EFL students who were taught using a mixed approach using Google Classroom had better writing skills than the other students.

Octaberlina & Muslimin (2020) suggested the ineffectiveness of English listening classes, and authors offered a proposal for an AI-based self-learning platform (AI-SLP) to enhance students' listening capacity. These difficulties inform the current design concept for AI-assisted listening platforms for English learning and the platform's operation flow. Current AI-assisted listening systems for English listening are analyzed by looking at the characteristics they offer. Based on their examination of the data, the researchers concluded that smart listening solutions offer benefits, such as access to a vast fitness database and several educational avenues. MIET-CT technology leverages artificial intelligence (AI) to provide adaptive, personalized, and interactive learning experiences for

students. AI algorithms are used to analyze data such as students' learning preferences, feedback, and performance, which help adjust the teaching approach and content to fit individual needs. Furthermore, MIET-CT technology allows AI to collaborate with human teachers by providing them with essential insights and suggesting strategies for improving student learning outcomes.

Albiladi (2019) proposed increasing interest and discussion on using technology in language instruction and study. This article aims to examine the impact of blended learning based digital method of instruction (BL-DMI) that incorporates online and face-to-face conversations on the growth of communication abilities on pedagogical outcomes, specifically regarding teaching English as a foreign language. Overall, the research ought to add to the growing amount of knowledge in the field of blended learning, particularly concerning the mastery of EFL. MIET-CT technology creates an English teaching style that is unique and more effective than traditional methods. It allows for personalized lesson planning and delivery, thereby catering to diverse learner needs and encouraging customized learning. Also, compared to traditional methods, MIET-CT technology enhances students' language proficiency through interactive and engaging activities, conversation simulations, and speech recognition technology.

Based on the result of the literature survey mentioned above, LMS, BL-IoT, ESL/EFL, GC, AI-SLP, and BL-DMI will compare with our proposed and implements the MIET-CT technique, which is based on self-regulated learning assessment.

The existing technology and teaching methods have problems such as a lack of interaction between teachers and students, and a lack of learning motivation among students, which has had a certain impact on English teaching. Traditional English teaching methods are often universal and not personalized enough to meet the needs of different students. However, the cloud based multi-intelligent English teaching framework (MIET-CT) proposed in this article addresses these issues by utilizing artificial intelligence algorithms to achieve personalized course planning and delivery, catering to the needs of different learners. At the same time, this paper also combines the blended learning method with MIET-CT technology to improve students' language ability and learning motivation through interaction and participation activities, dialogue simulation, and speech recognition technology, and further enriches the form and content of English teaching. Therefore, the work of this article provides new methods to solve problems in remote open education, and also helps to improve students' English language proficiency and learning effectiveness.

Proposed System

A culture's values, norms, beliefs, customs, and language provide the foundation upon which an educational program is built. The preceding process implies language can convey normative concepts like rules and norms. Language is the medium via which cultural norms and values are communicated and reinforced; these shape the identities and expectations of the people who live in a given society. Students develop their imaginations while studying a foreign language. Many college students believe learning a second language is essential for success in the workplace and social situations. Teachers can demonstrate to students the importance and value of learning a foreign language in their future career and social life by citing practical cases and survey results. In addition, teachers can also organize students to participate in practical activities, such as simulated business meetings and speech competitions, to better experience the practical benefits and sense of achievement that language learning can bring to students.

Language is crucial for successful interaction and communication. Besides reflecting and expressing facts and observations, language affects attitudes and behaviors. Verbal and written communication skills are essential for success in school. Conversations between instructors and students might occur orally or in writing. In addition to pure language learning, teachers can introduce relevant cultural elements and background knowledge to help students better understand the culture and values represented by the language. For example, when teaching English, cultural traditions

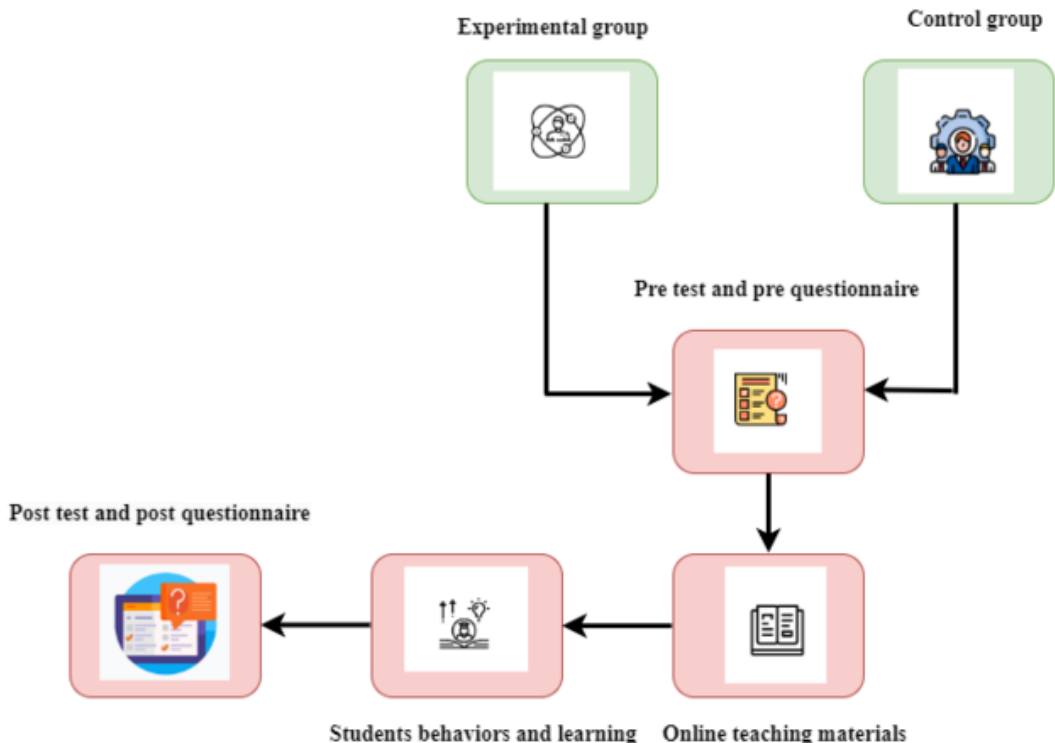
and history from the UK and the US can be introduced to enhance students' understanding of the language they are learning.

Students spend a lot of time learning new vocabulary. Teachers can use various methods to help students memorize new vocabulary, such as using auxiliary tools such as charts, audio, and videos. In addition, teachers can also help students practice oral and written communication skills by organizing dialogue and writing activities to improve their expression and communication skills. Figure 1 below depicts the instructional procedure.

As shown in Figure 1, before beginning their academic sessions, both sets of students participated in the pre-test and pre-questionnaire designed to gauge their levels of autonomy, collective efficacy, and engagement. Take the survey on self-regulatory learning to see how well you can control their behavior when on the internet. Then, before the class is uploaded to the online learning system, everyone studied the materials and listened to the recordings. Students in the experimental group participated in classes through the interactive response system (IRS) and did their homework using the collaborative problem-solving mode. Teachers can guide students to actively participate in classroom activities in the interactive response system by setting targeted questions and discussion topics. At the same time, teachers should also make timely adjustments based on student feedback to improve the effectiveness of the interactive response system.

Students in the comparison group participated in classroom flippers, completed teacher-created learning projects, and participated in class discussions. The curriculum for both sections is identical. In the end, students of both groups could master post-testing questionnaire knowledge by considering how students' self-regulation, collaborative efficiency, and interplay affect them. Teachers can evaluate and provide feedback on students' self-regulation, cooperative efficiency, and interaction through regular self-evaluation and mutual evaluation. At the same time, teachers can also analyze students'

Figure 1. Online learning process



academic performance, evaluate the role of these factors in the learning process, and provide guidance to students to help them optimize learning strategies and effectively improve learning outcomes.

$$R(wt) = \frac{1}{2} (smd^{-\gamma}) * \sum_0^t (t^{-\alpha} + \exp(2tl)) \quad (1)$$

In equation (1), R represents the winning team of the intergroup competition, wt represents some of the teachers, smd represents the students' mobile devices, γ represents the student's ability to think critically, α represents the total number of competitors, t represents the time it took to answer the questions, o represents some of the questions, $\exp$ represents the exponential function of the groups, and tl represents the time limit.

An increasingly diverse student body is enrolling in community colleges such that they can better serve these communities. Community colleges, on the one hand, cater to "non-traditional" students, or those who aren't still in high school, including some who have worked in the workforce for a while who are now returning to school to better themselves for the modern labor market.

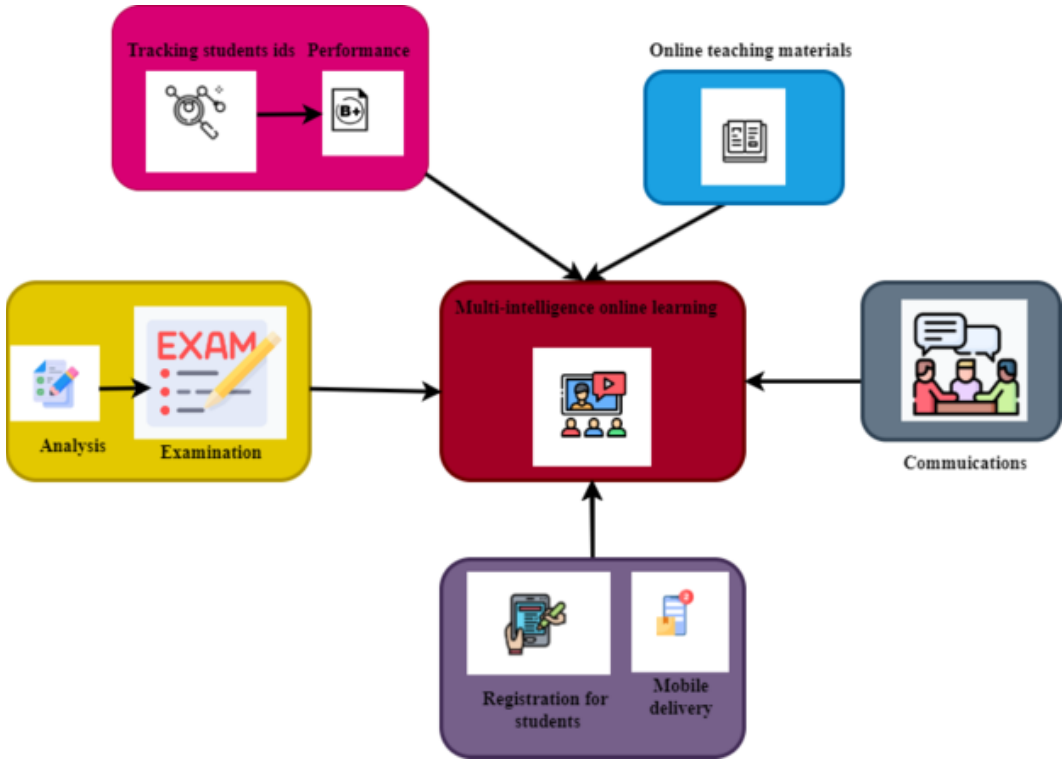
$$NS = \int_{-\infty}^{\infty} \beta(sd) - (\log U * \frac{1}{aqri^2}) \quad (2)$$

In equation (2), NS represents the number of students involved in locating the collaborative questions, especially for the online teaching process, β represents the number of students answering those questions, sd represents synchronous discussion, $\log U$ is the logarithmic function of time-constrained question representations, aq represents the number of students asking questions, and ri represents the number of students requiring instructor guidance. Younger, more vulnerable, and academically and psychologically diverse than their older counterparts, the at-risk students served by these institutions have a greater need for developmental education.

As shown in Figure 2, web technologies and related technologies offer excellent answers for the presentation, publication, and exchange of content and information, as in many other domains. Online education institutions commonly use learning management system (LMS) software. It can be difficult for teachers and administrators to keep tabs on pupils in different classes due to the wide variation in students' academic histories. Keeping tabs on them might improve productivity and test scores for students of all skill levels. Formal tests, quizzes, and exams are the typical methods of gauging academic performance. Provide pupils with accurate information that helps them achieve their goals. Suggest using ungraded self-review exams in highly specialized classes. Formative evaluation serves the purpose by checking for understanding and determining if adjustments to instruction are necessary. Guidelines for online registration, registration regulations, registering for a bachelor's degree, registering for graduate courses, course recovery, re-testing, course dropout prevention in the middle levels, and information exchange are all essential parts of educational administration.

The online classroom, or virtual classroom, is a great tool for teaching and learning. For information exchange and communication, it is recommended to establish an effective online information platform and establish online communication channels, regularly organize video conferences and online seminars, and use modern communication software for communication and exchange. Educational institutions can take various measures to ensure the quality of online education and student experience, such as regular course evaluations and improvements, providing diverse learning resources and support, designing interactive and experiential online courses and activities, etc. At the same time, educational institutions should also strengthen the training and improvement of the teaching staff and establish a scientific and reasonable teaching management system to ensure the quality of education and student experience.

Figure 2. Multi-intelligence-based learning



$$Pc_{sr} = \frac{1}{2\pi} \cdot \left[\frac{1-2ns}{\delta} \right] * \sum_1^8 (as_{ne} + gp) \quad (3)$$

In equation (3), Pc stands for post-class participation, sr for online self-regulation learning, δ for radiant classroom values, ns for the number of students in the control group for online learning materials, as for analyzing student learning performance values, ne for the number of students enrolled in online courses, and gp for group participation in classroom activities.

Students who have become accustomed to online schooling may see few significant alterations. However, advancements have been made in velocity and experience with a wider range of stakeholders, shifts in social and familial dynamics, and developments amongst pupils with access to the internet.

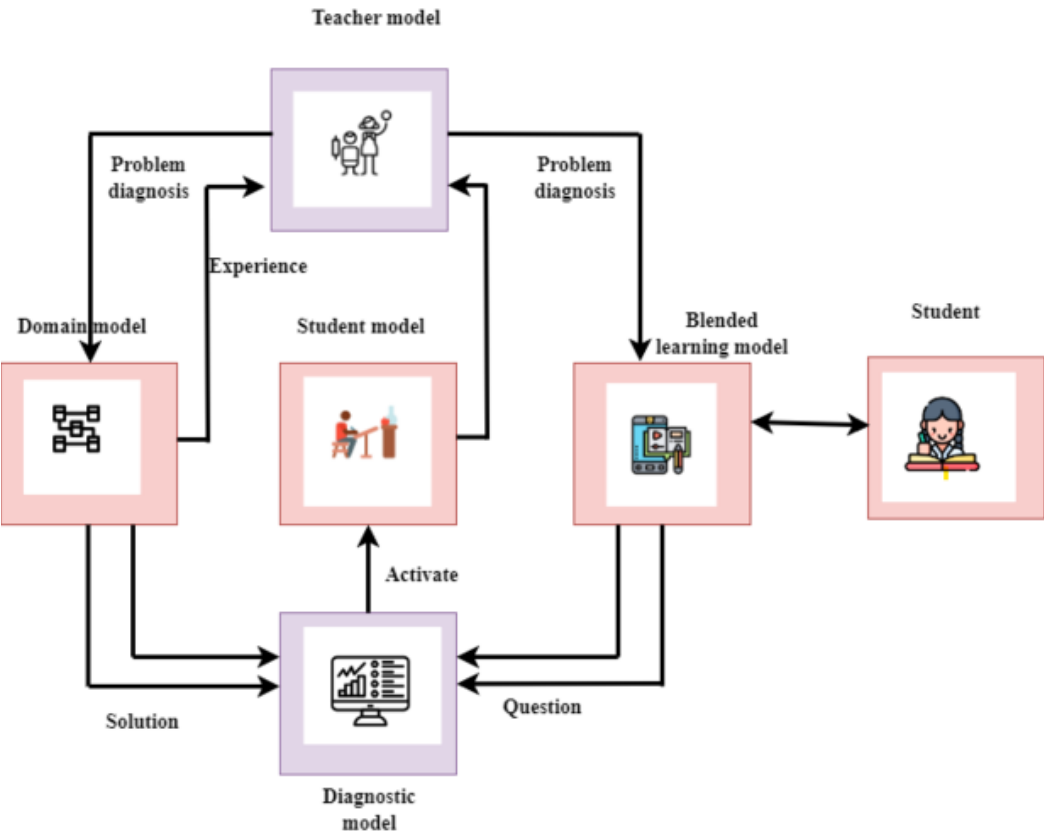
$$Mlt = \prod_0^8 \frac{ps}{Vari(\mu^2)} * dcos(td + qt_a) \quad (4)$$

From the above equation (4), Mlt stands for “discover multiple learning tasks, ps stands for promote values in problem-solving, and $Vari$ stands for the variance function of self-regulation before the questionnaire for blended learning methods. The remaining variables are specified as follows: $dcos$ for the trigonometric function of classroom activities; td for traditional flipped classroom activities; qt for the quantity of online learning systems; and a for the quantity of learning materials available to the student at home.

In the development of appropriate participation in some online courses, the quality of educational content relies on the level of dedication and sophistication or maturity of the students. The impact of these shifting conditions is far-reaching. It's a virtual meeting place for classroom instructors and their pupils. The software facilitates productive online instruction for educators. Communication between teachers and students has improved in all these ways thanks to the widespread use of tools like e-mail, social media, chat, and video-chat programs like Skype and Google Hangout. The term "online course material" refers to any resources, such as videos, audio recordings, and textual papers (including electronic data in any form) used in an online course.

Domain models illustrated in Figure 3 are systems that abstractly define some aspects of a body of knowledge, an area of influence, or a field of activity (a domain). Models in that field can then contribute to the resolution of problems. Domain modeling can be used in a standardized test to ensure students have a shared language and foundational understanding for learning about features and epics. The domain model is consistently refined in light of new insights gained by the institution. Diagnostic modeling recommends learning assessments to uncover student abilities, needs, and goals. In addition to learning assessment, methods such as universal screening, classroom observation, and progress tracking can also be used to discover students' abilities, needs, and goals. In addition, qualitative data and student feedback are also important reference points for educational institutions and teachers to conduct diagnostic evaluations and improvements, since there is a constant back-and-forth between assessment and teaching to gauge the effectiveness of both. Universal screening, classroom observations, tracking of progress, and qualitative data about the learning gap are all examples of

Figure 3. Domain modelling representation



diagnostic evaluation procedures. Students' results on a test can be used to gauge the efficacy of teaching strategies. The domain model can be applied to curriculum design, learning evaluation, and teaching improvement. Educational institutions can standardize tests according to the domain model to ensure that students have common language and basic understanding when learning characteristics and epics, and constantly improve teaching quality according to the domain model.

$$fv = \sigma_{ne} * mu \log(lc) + \left(ts * \frac{pm}{gs} \right) \quad (5)$$

As inclined, equation (5) fv represents the final values of the learning management system, σ_n represents the values of web technologies, ne represents the number of exams, mu represents the materials used in online courses, $\log(lc)$ represents the logarithmic function of the learning contents, ts represents the tracking of students, pm represents a large number of policymakers, and gs represents a small, uniform group of students.

The number of educators who are comfortable leading classes online continues to grow. Most likely, educators who participated in online training were exposed to resources meant to help them become proficient in using the medium to increase the system's overall performance.

$$Rs_{fe} = \sum_{ft=1}^9 * \sum_{vc=1}^9 em_{st} + \left(\frac{(rs-2)}{\sqrt{(4\varepsilon + md^2)}} \right) \quad (6)$$

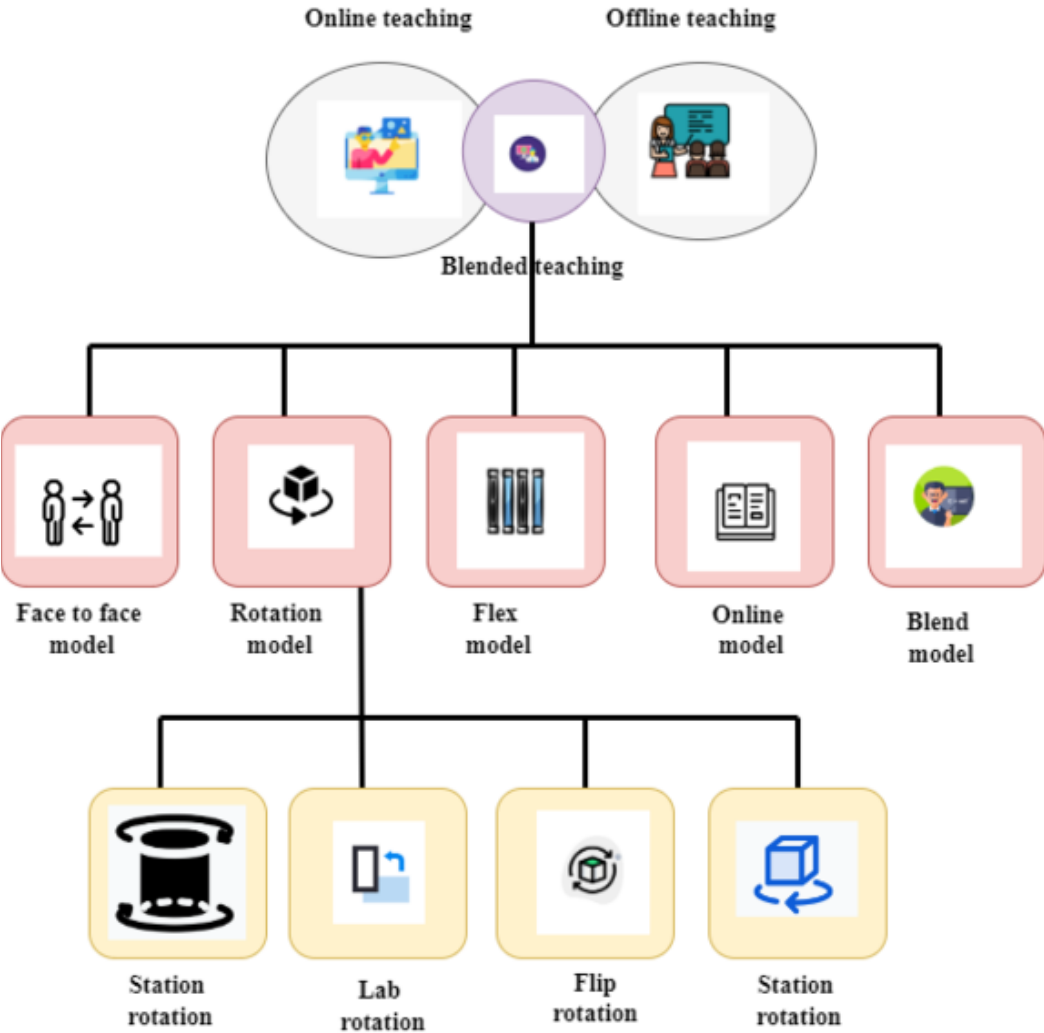
The suggested equation (6) gives Rs stands for results, fe for formal exams, ft for format tests, vc for many virtual classrooms, em for educational management systems, st for student tests, rs for many registrations, ε for some teachers taking the classes, and md for mobile delivery values.

Almost all schools now require some form of online instruction, and many provide resources to back up the blended learning trend. However, even with support and enough materials, there is a chance that teachers and students would not adjust to the new online reality.

The outcomes reveal how effectively or poorly each student achieved the goals. A "student model" represents a student's grasp of the material in pedagogical aid architecture or a well-learning space. A student modeling component (student model) determines if a student is using correct or incorrect information to solve a problem by comparing the student's behavior to the behavior of an expert system. Concepts can be better understood by modeling. A good student consistently comes to class intending to learn and grow. As such, if there is more than one exemplary student in a given class, there will be no rivalry between them. Finding out about the students' histories is the first step in teaching. Planning, carrying out, and assessing are all steps in the educational process. Most educators have a firm grasp of lesson preparation and delivery fundamentals.

As shown in Figure 4, blended learning is a method of instruction that combines face-to-face classroom instruction with digital learning materials and communication tools. Thus, the presence of both the teacher and the student is required. The ability of both the instructor and the student to set their own pace of learning is a major benefit of online education. Their online time management courses make it easier for students to strike a good work-study balance. When a teacher interacts directly with a student, either in a classroom or outside, they are said to engage in "face-to-face learning." A student can have a live conversation with an instructor in a learning manner. Having students interact more with their peers also has several positive effects. As part of blended learning, the face-to-face driver model integrates technology with traditional teaching approaches to boost learning outcomes. Under the paradigm, teachers still engage in face-to-face instruction with their pupils and use digital tools to enhance their lessons.

Figure 4. Blended learning



$$Br = \cup_0^8 (MI_{nv} * 3MU) + \tan(IS_{os}) \quad (7)$$

In the discovered equation (7), Br represents values of behavioral intent, MI represents the number of multimedia instructions, nv represents the number of video lectures, MU represents the methods used in e-learning, IS represents the values of the interactive system, and os represents the students' optimistic outlook.

Regarding education and student development, there is no logical or significant difference between in-person and online instruction compared to direct teaching. These concerns are cited as the ultimate cause of the reconfiguring reasons and experiences that have led to new online education and learning standards.

As part of blended learning, the rotation model provides students with a schedule that conforms to many of their preconceptions about traditional classroom settings. Because of online learning leeway, teachers can build courses specifically for their students. In addition, teachers are kept up-

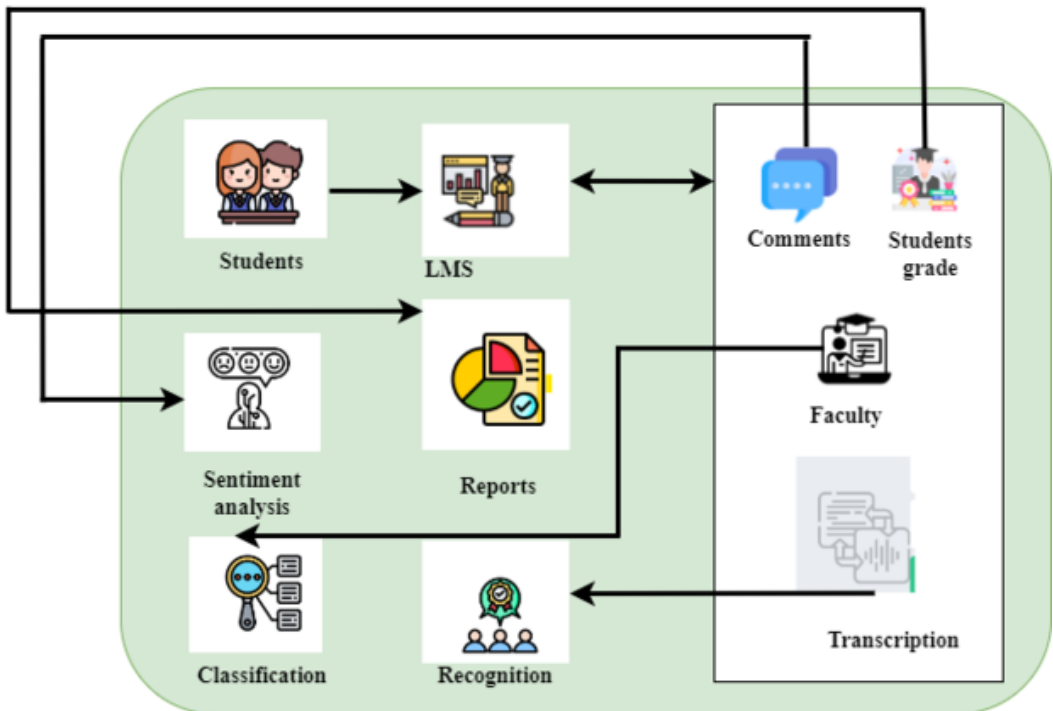
to-date on their students' progress, and they can easily make adjustments if a student is struggling. Station rotation, lab rotation, flipped classroom, and individual process are the four components that make up the Rotation paradigm. At least one of the stations can be an online learning station, and students can move between them according to a predetermined schedule utilizing the Station Rotation method. Rotating in "centers" or "stations" is most common in elementary schools, where the teachers are already accustomed to it. Students can follow a similar schedule to Station Rotation in the labs by completing rotations between stations. Students use a dedicated computer lab to study online. Blended learning takes many forms, including the flipped classroom.

Students in BL course are expected to do the bulk of their preparatory work online before coming to the classroom. Students using the individual rotation method follow schedules created by the teacher or an automated system. Instead of going around to each station, as they would have to do in traditional rotation models, students can proceed directly to the ones they want to participate in.

College students enrolled in massive online courses are depicted in Figure 5. Students can use the LMS and study for courses taught entirely online. It denotes a piece of computer code or an online service used to plan, carry out, and assess a certain form of education. It is a signal for conducting sentiment analysis. It entails deciding whether a piece of writing is helpful, damaging, or agnostic. Major corporate data analysts are turning to sentiment analysis to gauge public opinion, conduct in-depth market research, keep tabs on brand and product reputation, and assess consumer experiences.

A student's grade represents an academic year's worth of work. The pupil is persuaded into writing the report. A student's academic or extracurricular progress can be tracked on a report card. Its primary function is to assess a student's level of learning. A lecturer is a professor teaching at the university or college level. There are classes for both freshmen and upper-level students. Voice recognition technology is used to process verbal requests.

Figure 5. Learning management system



$$m(i) = \left(\frac{\infty}{\beta} \right) * \frac{1}{2} (1 + \sin^{-1}(SR + ar^2)) \quad (8)$$

Using the trigonometric function of online classrooms $\left(\sin(-1) \right)$ in equation (8) above, the amount of student-to-student and student-to-resource interaction SR and the rate of learner adoption ar^2 is represented by blended learning in multi-intelligence process $m(i)$. Results from rapid response journals work especially well with online education by $\left(\frac{\infty}{\beta} \right)$.

A worldwide voting population suddenly needs an online scholarship. The sphere includes students, educator designers, instrument manufacturers, academic programs, and their respective administrative heads.

$$Tcc = \sum_1^7 (h_{cm} + sb) * exp(2\varphi - ds^3) \quad (9)$$

As inferred from equation (9), Tcc represents the total number of communication channels, h represents data storage systems, h_{cm} represents computer memory, sb represents security barriers, exp represents computer networking for many locations, and ds represents the distribution of educational content 2φ .

The teacher-student dynamic can take many forms, including the dissemination of information, the promotion of positive attitudes, and the provision of constructive criticism. In addition, the student and the instructor can engage in two-way communication through questions and classroom discussions.

It provides ready-to-print dictations, automated translation entry, and hands-free administration of various devices and gadgets. Transcripts are copies of a student's permanent academic record, which includes their coursework, grades, and any awards or recognitions they may have received up until the current academic year. It can be broken down into a wide variety of subsets.

Section 3 summarized the discussion of the framework and rationale for the suggested MIET design, which is based on the collaborative activities of college students. In addition, important data and equations were included to illustrate the MIET-CT conceptual framework and statistical model. In the literature collection and analysis program, we collected relevant literature obtained through online databases, digital libraries, and search engines, including academic papers, reports, and books. Then, we used a step-by-step screening method to screen this literature and select literature that meets the research theme and purpose for further analysis and integration. In the part of data analysis, the effectiveness of this research method is demonstrated by direct teaching analysis of college English education, online teaching decision analysis, English education through blended learning, analysis of factors affecting primary school students' language learning, and performance-based learning analysis.

RESULTS AND DISCUSSION

Students can improve their reading, writing, listening, and speaking abilities through blended learning with a chosen dataset from a source [30]. MIET-CT is especially the case when the cost of in-person tutoring is borne by the pupils of both online, offline, and blended learning from 10 to 100 sets with an increment of 10 for all. In addition, having them practice speaking and listening independently of one another is more effective than in a synchronized fashion. Students' outcomes in English classes employing a blended approach are analyzed below.

The instructional approaches shown in Figure 6 are those the teacher explains in detail when introducing the students to a new concept. Better classroom communication is fostered through direct instruction, which benefits everyone. In class discussions, students are likelier to find their voices using equation (7). In the same way, they can use their time together to get to know one another and their instructors better. A teacher generally stands at the front of the classroom to give materials. After students have been taught something, they are tested on that material. Furthermore, instructors are strongly discouraged from straying from their class plans. This makes it harder for educators to tailor their lessons to their students, which isn't ideal.

The rise in online courses, as seen in Figure 7, indicates these courses' asynchronous or self-paced nature. Students are given the autonomy to study on their own time; however, they are nevertheless held to weekly deadlines. MIET-CT technology can improve distance education by providing students with innovative learning resources and customized support, fostering their motivation and engagement, and tracking their performance and needs. For example, MIET-CT technology provides virtual classrooms, interactive activities, multimedia materials, and AI-supported feedback and assessment. These features contribute to improving the quality of distance education and encourage students to take more responsibility for their own learning outcomes. Participation, student understanding in class, questionnaires, and questions asked by students throughout the semester can all help. Students increasingly opting to take their courses online rather than in a traditional classroom setting can be achieved using equation (2).

The biggest incentive for many students to take classes online is financial. Investing in extensive training and materials for teachers could be costly. The mixed approach is more effective as a teaching-learning strategy for English than the conventional method. Blended learning is more effective than more traditional approaches to education.

Figure 6. English education in institutions direct teaching analysis

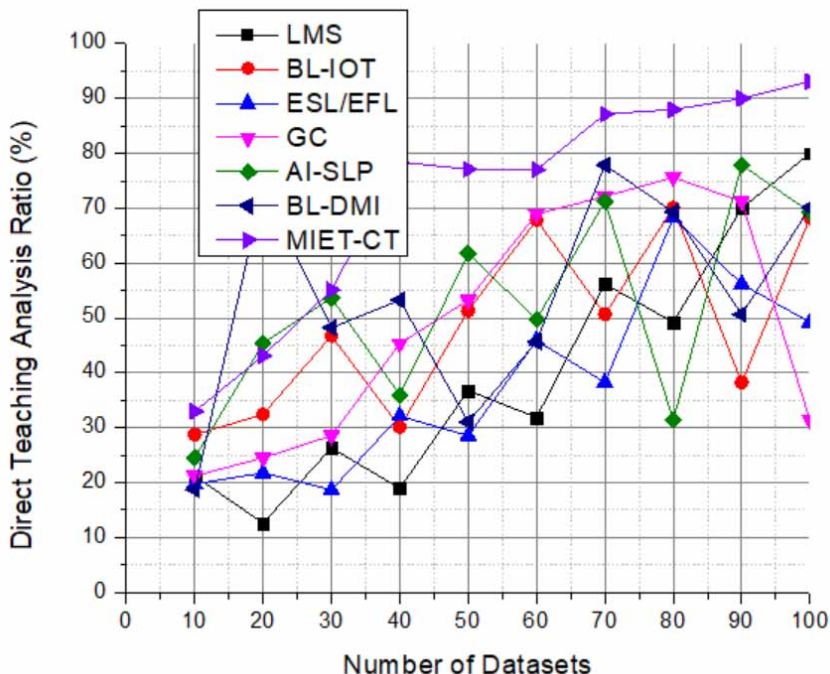
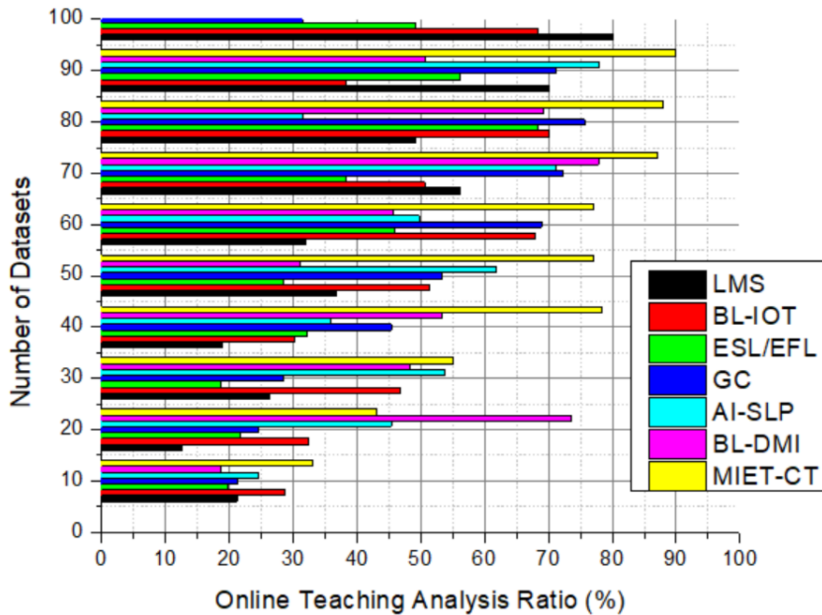


Figure 7. Online teaching determination analysis



As seen in Figure 8, machine learning is a subfield of AI that seeks to improve accuracy by modeling human learning processes in code. Machine learning is becoming increasingly important as the big data field develops. Blended learning is revolutionizing the classroom by combining online and in-person instruction applied from equation (4). As a result, teachers are employing ML to spot at-risk students earlier and intervene to improve their academic outcomes. In addition, researchers are using machine learning to speed up their study and have more time for discovery and insight.

Figure 9 shows the many obstacles that students may encounter when learning English. Pronunciation, grammar, spelling, and vocabulary are some areas where mistakes can be made when communicating in another language. Students have more time to consider and pause when reading and writing a text than listening to and speaking in ordinary English. The English language contains full words with similar meanings through the equation (8). The process of learning English is difficult and convoluted for many reasons. Its spelling, semantics, and restrictions contradicting existing laws are a few linguistic characteristics that make it hard to understand.

Performance-Based Learning Analysis in BL

From the Table 1, make sure that pupils grasp the material that teachers say they are teaching them with datasets from 10 to 100. As teachers constantly evaluate student progress, they may tweak the software to improve it. Education in the English language is one of the most important components of human resource development. Parents are under a lot of pressure, and when their child performs poorly in school, it may have a devastating effect on their mental health using equation (5). Examples of performance evaluation tasks that can be used in the classroom include writing a few words in a brief open-ended answer, conducting lab experiments, curating student projects, and creating original research articles.

Figure 8. English education through blended learning

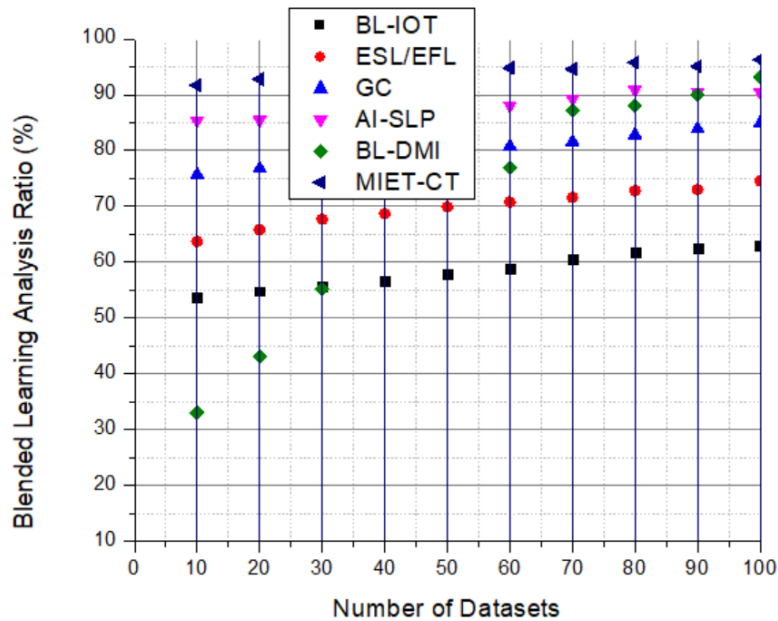
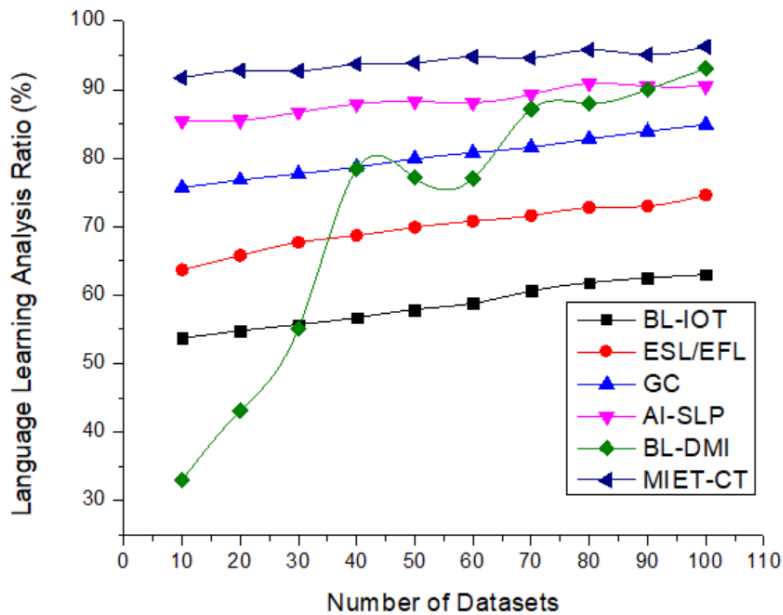


Figure 9. Factors for pupils struggling with language learning analysis



Based on the above graphical methods from [24] to [29], LMS, BL-IoT, ESL/EFL, GC, AI-SLP, and BL-DMI will compare with our proposed method and implement the MIET-CT technique, which is based on self-regulated learning with enhanced assessment.

Table 1. Performance comparison analysis

Number of Datasets	AIA	DDS	MPC-FD	EFMD	GAN
10	13.7	15.7	25.7	15.4	11.7
20	34.8	65.8	36.8	35.5	22.8
30	25.7	67.7	47.7	46.7	42.7
40	46.7	68.7	48.7	57.9	53.7
50	57.9	69.9	59.9	78.3	63.9
60	58.8	70.8	78.8	88.1	74.8
70	60.6	71.6	81.6	89.3	84.6
80	61.8	72.8	82.8	90.9	89.8
90	62.5	73.0	83.9	90.5	90.1
100	63.0	74.6	84.9	90.5	96.3

CONCLUSION

Students are free to experiment with new technologies and use various learning strategies due to the incorporation of AI into blended learning. Blended learning with AI improves student learning and retention and teacher productivity. Artificial intelligence has the potential to help students and educators by streamlining and automating these processes. The proposed method, MIET-CT, leads to better student and teacher educational outcomes. Blended learning has many advantages, one of which is that it makes conventional training more effective. Students can enter class on equal footing if they can work independently beforehand. There's more time to hold productive discussions and put what they've learned into practice.

Blended learning is a successful method of instruction for a wide range of student populations, including those who are new to the English language or have learning disabilities. Blended learning combines the best of traditional instruction with the flexibility of modern digital tools to create a more engaging educational environment for students. Blended learning strategies, combining online and in-class instruction, benefit students and teachers. Evidence from studies demonstrates that using blended learning techniques, student performance and engagement can be enhanced with a performance of 96.3%.

DATA AVAILABILITY

The figures used to support the findings of this study are included in the article.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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