

Retraction

Retracted: Design of Artificial Intelligence-Based English Network Teaching (AI-ENT) System

Mathematical Problems in Engineering

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] X. Liu and X. Huang, "Design of Artificial Intelligence-Based English Network Teaching (AI-ENT) System," *Mathematical Problems in Engineering*, vol. 2022, Article ID 1849430, 12 pages, 2022.

Research Article

Design of Artificial Intelligence-Based English Network Teaching (AI-ENT) System

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The English teaching network system uses the Internet to provide distance education. There are several challenges in teaching, including a lack of knowledge and expertise, expectations from students, lack of facilities, and unfavourable opinions about the process of English teaching and learning. In the era of information, education combines the advantages of both online and offline learning, including conventional and networked learning. The production of test pattern paper is an important part of the English teaching network since it helps students study independently. In this study, the artificial intelligence-based English network teaching (AI-ENT) method has been suggested to enhance the student's performance in distance education. There are strong indicators that the methods of teaching and learning and the teaching tools used by machine learning can be fundamentally altered by AI. With AI technology tools and teacher coaching, students can make significant progress in their English learning experiences. Artificial intelligence expert system thinking is reflected in this design. Teachers and students can improve their English proficiency by gaining access to relevant data from a wide range of sources. The system's test application reveals that it can assist students in increasing their learning efficiency and making learning information more relevant.

1. Introduction of English Teaching Network System

Online learning and the Internet's expansion of computer networks allow many different learning techniques and environments [1]. It is possible to teach English remotely using a self-directed learning technique [2]. The English network education system's design to boost learning efficiency and accuracy is integrated into the Internet mobile terminal [3, 4]. The best strategy is explored for designing an English network teaching system [5]. It has been a requirement for school students to take an English major because of the reform and liberalization of the educational system [6]. Artificial intelligence (AI) is a hard and innovative area [7]. The developing field of artificial intelligence is based on the integration of computer science, cybernetics, information theory, psychology, philosophy, linguistics, and other fields [8]. The primary goal of computer science is to

learn how to mimic and replicate human cognitive abilities [9]. Students started to employ computers in education due to the rise and development of artificial intelligence. Its inception and growth have made information technology and curricular integration more important [10]. Statistics and artificial intelligence provide a complete and clear combination of English and instructional web apps to achieve its data analysis goals. Before taking English classes, students should know their proficiency in the language. This will assist customers in selecting the ideal course for their needs and skill level, i.e., whether they are at an introductory, intermediate, or advanced level. Museum of Knowledge exclusively offers intermediate and high-level language training for businesses. Therefore, students will be aware that an entry-level course module is not available at the museum.

There has been a shift in the emphasis of today's society on the practical application of language quality [11]. Contradictions between this development and English teaching's

purpose are becoming more apparent [12]. School English tests and teaching methods emphasize exam-oriented education, which neglects the content of language use and its ultimate goal, therefore failing to better adapt to social progress and increase English competence in society [13]. Information processing and database creation are at the core of an English network education system [14]. Optimizing English teaching network information management and settlement, improving network information management and resource scheduling, and enhancing the system's compatibility with processing capabilities are some of the goals of the server device [15–17]. Distant education monitoring and learning control create English network teaching systems. Using artificial intelligence, learning programmes may now be personalized to each student's individual needs and interests. According to their level of expertise and learning pace, students get the most out of the educational experience. Through AI, it is possible to remove geographic limitations from schooling. With the use of artificial intelligence (AI), students from all over the world can access the best teachers, no matter where they are. Using this system, students can study the information points, levels, and safeguards that are part of an English test and examples of the offered format, notably the maintenance of the knowledge-based foundation, test maintenance in the password area. An online English teaching system incorporates an Internet architecture to provide online English teaching and recognition [18]. The teaching system's whole database remains centralized in the network architecture. A larger system load is required to ensure that the information in each database copy is consistent [19]. It is now possible to create a network-based teaching system for English as a second language because of the Internet's popularity among students and teachers alike [20]. The conventional method concentrates on essential skills, while the contemporary style focuses on broad concepts. Teaching tools such as lesson plans and practical skills, including learning and thinking, are the most popular. For the most part, educational standards are set by the government. A classroom, textbook, or anything else is no longer required in modern schooling. Student can simultaneously take courses from various colleges and universities online. Taking one class at a time restricts pupils' advancement in traditional schooling.

The artificial intelligence-based English network teaching (AI-ENT) method has developed skills and assessment systems. Schools and teachers can soon accomplish more than ever before with AI educational solutions as they become more developed. Teachers can have more time and flexibility to provide students with the knowledge and adaptability that only humans can deliver, thanks to AI-driven efficiency, personalization, and automation. The ideal vision for AI in education is that both teachers and machines work together to achieve the greatest possible outcomes for students. A new method of instruction known as the network teaching system is being applied using computers and the Internet in the virtual classroom. It offers a distinct edge over more conventional methods of instruction. An ideal network teaching system can completely replace the Internet teaching procedure.

The main contribution of this study is as follows:

- (i) Artificial intelligence-based English network teaching (AI-ENT) method has been recommended to improve the student's interaction.
- (ii) Mathematical modelling of proposed machine learning-assisted English education systems is becoming more supported by modern reforms and developments in English teaching.
- (iii) Explores how artificial intelligence (AI) is used in English classrooms to assist electronic learning.
- (iv) Enhances education quality and helps students learn English more efficiently by analyzing pedagogical approaches.

The rest of the (AI-ENT) technology research can be organized similarly. Section 2 describes the literature research. The new ideas that have been presented about and used in this study are briefly described in Section 3. Section 4 details the findings and conclusions based on the data. Last, in Section 5, the (AI-ENT) technology comes to a close with a thorough analysis of the findings.

2. Related Work of English Network Learning

The Internet has unquestionably revolutionized foreign language instruction, and English is no exception. Colleges and universities were increasingly using computer Internet technology (CIT) to improve their management efficiency and teaching quality, deepen the reform of English teaching mode, speed up the construction of college teaching management, create a better campus environment, and enhance the level of information management [21]. It was becoming more common for foreign language teachers to focus on computer-aided language instruction in a network context. The expansion of digital information network technology has allowed education to acquire experience, from current teaching methods to computer technology and communication technology. This study used an improved fuzzy hierarchical neural network system (IF-HNNS) to create an English language teaching system [22]. The quality of English-language instruction directly impacted the effectiveness of classroom instruction. The traditional teaching method had been transformed, and students had the freedom to study at their own pace and in their manner, thanks to the advent of interactive educational systems. Computer-aided learning with human-computer interaction techniques can enhance the educational and teaching cycle monitoring. In a network database, multiple entries or files belonging to members can be linked to records or files belonging to network administrators. It is possible to illustrate this paradigm with an upside-down tree, each branch connected to its owner. This includes logging in and out of tasks and jumping between different websites.

Conventional teaching approaches were used mostly in the home and academic English language classes. Students now had poor academic competency because they had a restricted academic vocabulary. It was the role of English instructors to assist students in developing their academic

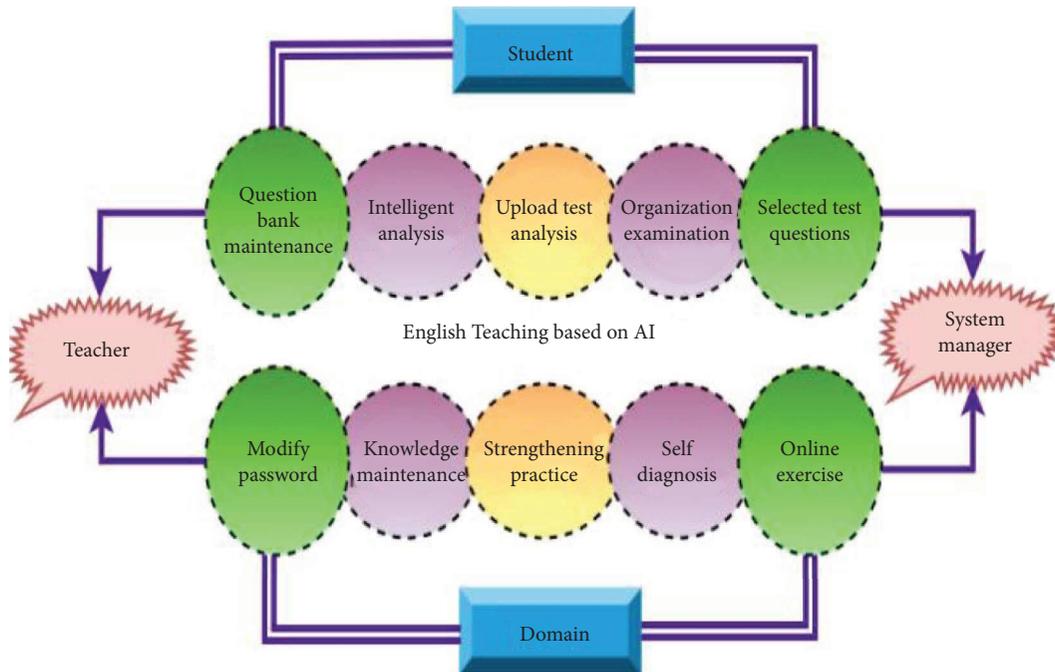


FIGURE 1: Design of a teaching system using AI.

language skills. Using the production-oriented approach (POA), this study constructs the teaching design for academic English and investigates successful methods for increasing students' academic English competency [23]. Teaching academic language skills under the auspices of POA theory is shown to be more in line with the foreign language teaching practice and more successful in stimulating student internal motivation, promoting task completion, and improving students' sense of acquisition. New teaching methods and creative apps need to be introduced to incorporate deep learning (DLA) environments into the learning environment and educational settings. A current technique was automating successful intellectual instruction using picture identification and deep learning. Image discovery was the basis of deep learning [24]. There was a brief introduction to image detection for ecological assessment. Learning centres and students alike can benefit from a personalized education system that provides resources adapted to their unique learning preferences, allowing for a smoother transition into a platform.

Scientific tools and approaches, such as multimedia technology (MMT), have improved studying a fresh teaching strategy [25]. Multimedia technology was widely thought to be an efficient method of teaching languages and enhancing students' linguistic ability. An important use of multimedia technology in English language instruction was for speakers of non-native languages. An in-depth examination of multimedia tools and technologies was presented in the research. At length, the pros and drawbacks of various multimedia tools and technologies are discussed. The artificial intelligence-based English network teaching (AI-ENT) method has overcome the existing model issues. This study has been suggested to increase the participation ratio,

interaction ratio, efficiency ratio, resource utilization analysis, and performance ratio.

3. Artificial Intelligence-Based English Network Teaching (AI-ENT) Method

Due to the close connection between culture and language, English teaching [21–30] encompasses all aspects of vocabulary acquisition and social learning. Artificial intelligence [31–40] has opened up new teaching options in higher education, and social approaches at college now have to keep up with the growing integration of information technology and chosen English teaching techniques. Artificial intelligence technologies can be employed in English teaching practices to encourage and increase education quality, and these technologies have both technical benefits and adjacent qualities geared to enhance teaching.

Figure 1 shows the design of a teaching system using AI. The module is a well-structured system that uses the Internet to build an integrated education system—several students, including subject matter experts, English instructors, students, and system administrators. When students log in, the system's operational authority frequently has distinct identities as a result. Admins refer to a group that does daily maintenance prearranged by system operators, such as user administration, test question bank management, and password changes.

The term expert in the field refers to English teachers who have had extensive experience in the classroom. This system can evaluate information points, levels, and protections that are part of an English test and examples of the supplied format, primarily maintenance of the knowledge-based foundation, test maintenance in the fixing passwords. Each teacher has access to the given courses and students,

and the lecturer refers to English teachers in general. The major authorities are in charge of organizing tests, uploading test data, and analyzing the designated student group's information points. The term student refers to regular students who can use their allotted login and password to access the system.

The teacher model is a framework for organizing, managing, and implementing the complete core of teaching activities in a school or educational setting. One of its main goals is to establish a framework for analyzing educational goals, teaching methods, and learning styles so that the approach can generate successful teaching at the level of the students. Teachers use the teacher model as a framework for managing all aspects of teaching in a school or educational context. As a result of artificial intelligence, learning programmes may now be tailored to each student's specific needs and interests. Students benefit from the educational experience when it is tailored to their degree of knowledge and speed of learning. Through AI, it is possible to remove geographic restrictions from education. Students worldwide can now have access to the world's greatest teachers because of artificial intelligence. Students can use this system to learn about the information points, levels, and protections that make up an English examination and instances of the offered structure, such as the maintenance of the knowledge-based foundation and the password area. After students have been assessed in the classroom, the student model serves as the basis for intelligence education by characterizing the structure in knowledge and intelligence and learning reasons and methods. The result is a combination of the student's aim and realistic skills, integration of student module learning, assessment of student's status, and development of a teaching strategy. Students are taught, monitored, evaluated, and guided by the teacher using the most effective manner.

The domain model incorporates a student knowledge base and a teacher expertise level. Students can learn about their academic progress, educational background, solved problems, and other relevant information in the student knowledge base. This information serves as a systematic framework for evaluating students, selecting education, organizing material, and resolving system issues. An important part of the diagnostic paradigm is identifying and rectifying student mistakes and defects in education using personal characteristics. Both students and teachers are considered in this paradigm. The student knowledge base is accessed to learn more about your academic achievement and educational background. An essential diagnostic component is identifying and fixing students' errors and instructional inadequacies. There should be a means for science teachers and their teaching to rely on local and worldwide resources, support systems, and networks to maximize their progress in science teaching and impact students' scientific understanding.

As an integral part of undergraduate English instruction, classroom evaluations play a vital role in the assessment of English and have sparked an interest in U_j teaching English using neural networks, which is defined as follows:

$$U_j = \prod_{m \in L} (z_m + \rho_L)^2 - \prod_{n \in S} (z_n + \rho_S)^2. \quad (1)$$

As shown in equation (1), a scheduling transmission channel model for English teaching resources is with $(z_m + \rho_L)$ input parameters and $(z_n + \rho_S)$ output parameters and m, n are the function of the transmission channel. Algorithms for machine learning learn from the data they are exposed to and adapt their performance accordingly. The "learning" aspect of machine learning refers to how these systems adapt their processing methods over time, just like people do. Supervised, semisupervised, unsupervised, and reinforcement learning are all forms of machine learning algorithms.

The input layer, output layer, and hidden layer form the basis of the machine learning algorithm. Layers are held together by a ρ adjustable weight. The $Y_j(k)$, $\sigma_j(k)$, and $x_i(k)$ subscripts signify the nodes of the input layer of the learning algorithm, respectively, whereas j, i denote the elements of the output layer of the network. The approximation error function H is defined as follows:

$$H = \frac{1}{2} \prod_{j=1}^L (Y_j(k) + \sigma_j(k))^2, \quad (2)$$

where $\sigma_j(k) = g(x_i(k), \rho)$.

As shown in equation (2), every network layer and ρ node function contribute to the g function's composition.

Thanks to machine learning and knowledge discovery, advances in information processing technologies have been made possible. Figure 2 shows the strategy of intelligent online English learning. It does a lot more than look at prior data and see any connections, and it does a thorough analysis to decide the best course of action, forecast future trends, and much more. Useful information such as legislation or higher-level data can be reliably mined from relevant database sets and used as a resource for extracting new knowledge using machine learning. College institutions' electronic archives are being accessed because of the rapid expansion of Internet information innovation, electrical science, and technological innovation. Students are no longer classified as excellent or terrible based on their performance on a test. The exceptional outcomes of the evaluation methods have played a critical and irreplaceable role throughout schooling. Data from a broad range of complicated information can be summarised and analyzed using AI systems. These systems can convert and extract data and uncover hidden conceptual norms and correlations relevant to the overall group condition. The Student Help Desk frequently recommends Firefox as the best browser for students. According to our educators' survey, this browser has the most consistency in its advancements and the most forgiving relationship of all the ones considered. The Student Help Desk normally recommends Firefox as the preferred online browser. Various elements that can be investigated extensively and comprehensively hide the evaluation findings and their underlying linkages, strengthening the process assessment system and allowing for an application

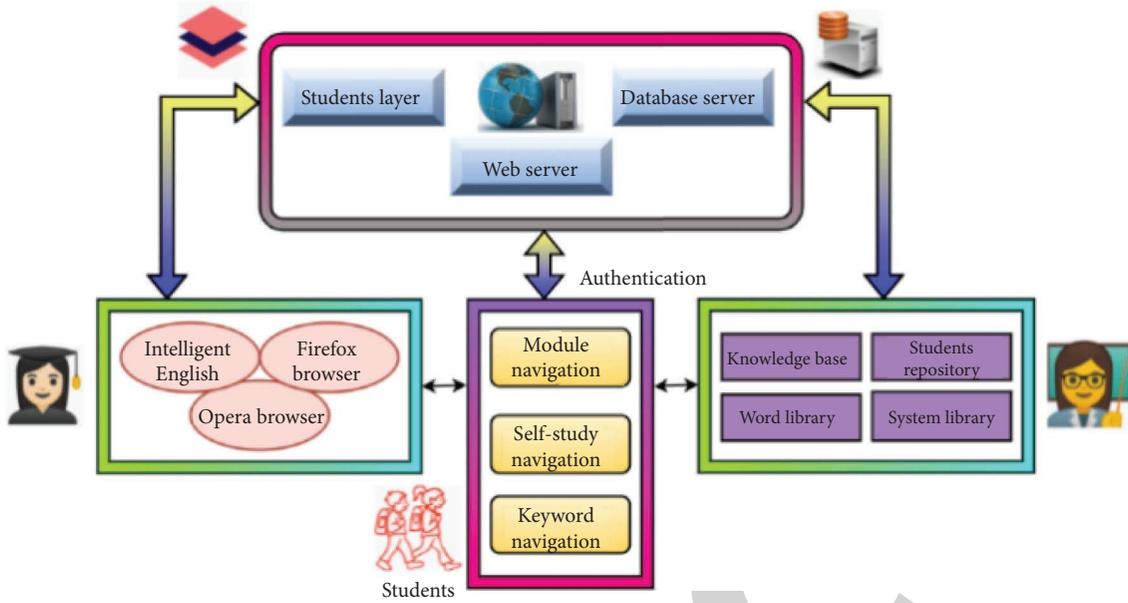


FIGURE 2: Strategy of intelligent online English learning.

procedure that is scientific and objective throughout the whole process assessment.

The purpose of using distributed databases in network learning systems is to make knowledge more accessible while collecting data more quickly. The most basic kind of network learning is knowledge databases, which are not necessarily formal instructions in the traditional sense. A knowledge database collects indexed explanations and helps with software issues, coupled with detailed instructions on certain tasks. Web page distribution system distributes web pages in response to students' requests for information. Storage, processing, and delivery are the main responsibilities of a web server, and hypertext transfer protocol (HTTP) is used for this kind of communication. The process of verifying a student's identity is known as authentication. The credential is usually in the form of a password, which is kept confidential and is only known by the individual using it and the computer system. A knowledge base is a collection of indexed explanations and instructions that can aid with software issues and specialized tasks. Students' needs for information are satisfied through a system for delivering web pages. The primary function of a web server is to store, process, and distribute websites to users. In addition to HTTP, web servers also offer SMTP (simple mail transfer protocol) and FTP (file transfer protocol), used for e-mail, file transfer, and storage purposes. Students with access to the Internet can access many media and other materials. Needs assessment, goal analysis, and performance assessment are all methods that instructional designers might utilize to uncover instructional issues. Cloze reading, cooperative learning, hands-on learning activities, scaffolding, group instruction, self-assessment, thematic education, and word wall are the most popular instructional tactics.

The Student Help Desk normally recommends Firefox as the best online browser for students. Teachers suggest it

because it has demonstrated the greatest consistency in its different upgrades compared to the other browsers on this list and has had the most forgiving relationship. Students returning to school should use Opera as their primary browser. Librarians use communication technology to give electronic reference services and instructional assistance to learners mainly linked to their institution's library through a computer network. They provide remote access to and electronic distribution of library materials. Researchers, students, and other academic personnel can store their papers in a web repository that is simple to maintain. Many intellectual repositories allow transparency around the content of each contribution to be selected. All teaching system data must be kept in a single location on the network. As a result, each database requires a bigger system load to ensure its integrity. Internet use by students and teachers alike makes it possible to create a network-based approach for teaching English as a second language. Teachers and robots should work together to ensure the best possible outcomes for students. The network system is a completely new teaching approach that utilizes computer and Internet technology in the virtual classroom. Because of this, it has a distinct advantage over traditional education. Ideally, a network teaching system can replace the existing teaching methods on the Internet.

Weights are used in proportion to the negative gradient direction estimate error H , which is the particular analysis to speed up the learning process, as given in the following equation:

$$\lim_{k \rightarrow \infty} H = \lim_{k \rightarrow \infty} \frac{1}{2} \sum_{j=1}^L \sum_{j=1}^L (Y_j(k) + \sigma_j(k))^2 = 0. \quad (3)$$

The core network receives information from instructional resource management. The English network teaching

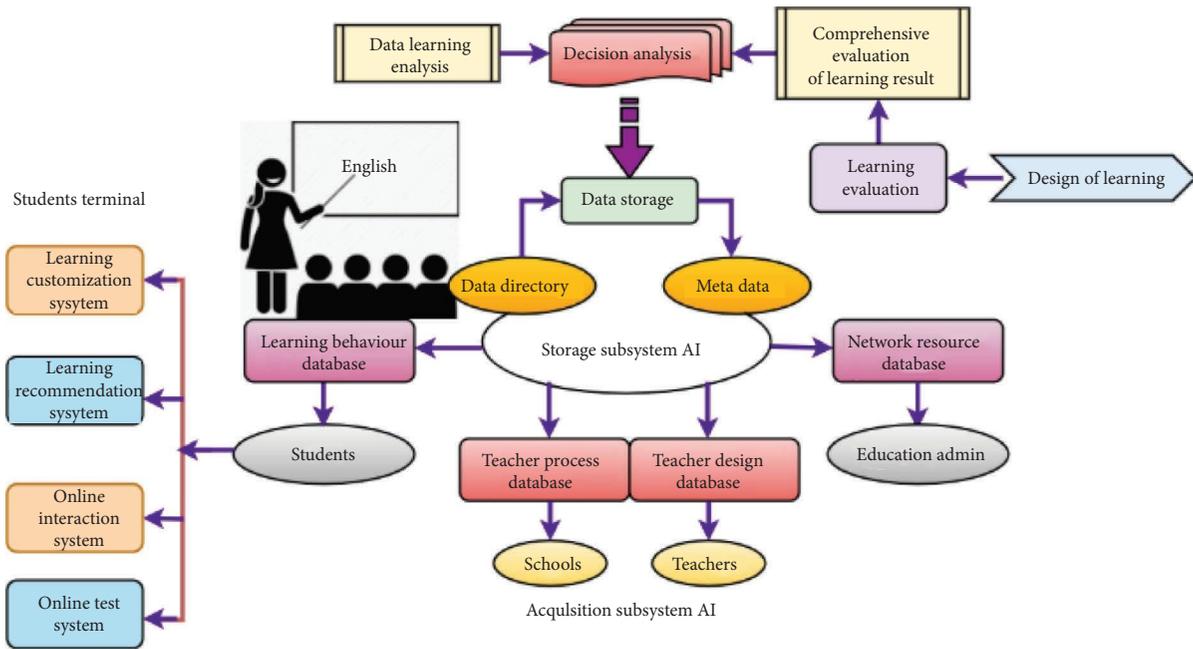


FIGURE 3: Model of AI-based English teaching ecosystem.

resource data set X is broken down into c classes. The scheduling grid for English language teaching resources is as follows:

$$ET(q_j, m_j) = tue_{il} + QFR(q_j, m_j). \quad (4)$$

As shown in equation (4), t is an attribute weight, ue_{il} (weighted distance) and $QFR(q_j, m_j)$ are all attributes of ET . English network teaching resource flow is used to determine which nodes should be prioritized.

The fusion of English network teaching resources' feature information acquisition is stated in the following equation:

$$\text{Info}(C) = \sum_{j=1}^l q_j + \log_2 q_j. \quad (5)$$

As shown in equation (5), C is the set of items in the training set that have q_j values in the $\log_2 q_j$ attribute:

By creating an English teaching model, students can be encouraged to develop strategies and material, which can raise the students' interest in the subject matter. An ecological approach to English teaching is recommended using the interaction process to create a long-term educational system and assist good teaching. Higher education institutions evaluate their connection with English instruction using artificial intelligence (AI). Figure 3 shows the model of the AI-based English teaching ecosystem. It has opened up a world of possibilities for English teachers due to the current learning environment encompassing these elements. A wide range of approaches can set up a classroom for a specific course or programme. Physical learning environments (classrooms, lecture halls, and laboratories) are not the only learning environment components. Information on the

characteristics of the students and the aims of instruction and learning will also be included.

Textbooks, teachers, data support organizations, students, and other English teaching system participants are integrated with the implementation of English education and learning, modelling approach, resource development, assessment, and management mechanism. The designed environment uses data processing to meet learning requirements, behaviours, and activities. In an English-teaching setting, each process is discussed in more depth.

3.1. Step 1: AI Acquisition. Data from instructional design, education, learning behaviour, evaluations, system resources, and the English corpus are extracted to construct a database for studying the English language teaching process.

3.2. Step 2: AI Data Storage. Aiming to process the collected AI for data storage through data directory, metadata, and encryption is the goal of this study. Data warehouse technology can be used to store, assemble, and sort AI data for many sorts of English learning data. Metadata and encryption are used to store the artificial intelligence (AI) used in this inquiry. Data warehouse technologies can be used to store, assemble, and sort AI data for various sorts of English learning datasets. The use of business intelligence technologies, such as data warehouses, helps facilitate and support business intelligence (BI). All data warehouses are used to query and analyze massive amounts of data, and several different data warehouses exist. Electronic data warehousing (EDW) is the foundation of business intelligence (BI). With data warehouses, it is now possible to mine data for trends that might lead to greater sales and profitability.

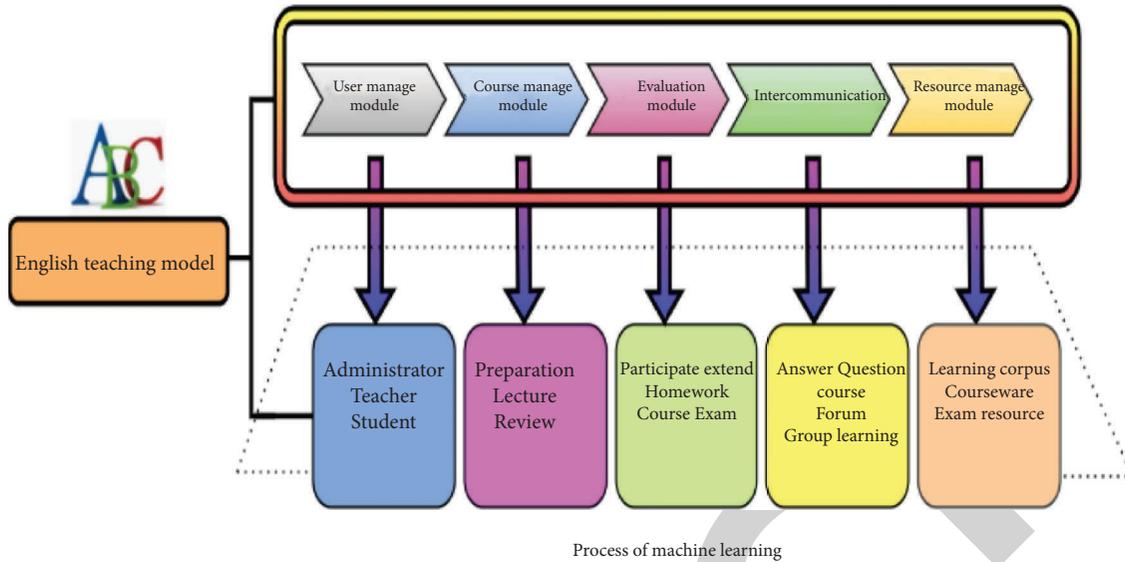


FIGURE 4: Process of machine learning in network education.

3.3. *Step 3: AI Analysis.* This method uses statistics and artificial knowledge to accomplish data analysis goals and gives a full and understandable integration of English and an educational web application. Utilizing these processes' classification, evaluation, prediction, association principle, and grouping can boost English learning.

3.4. *Step 4: AI Application.* This process can comprise constructing, using the classification, evaluation, prediction, and association principles.

Education administrators are in charge of setting policy and overseeing the daily operations of daycare facilities, preschools, schools, and postsecondary institutions of higher learning. Other institutions such as museums, enterprises, and job-training programs are supervised. Multiple records or files of members can be linked to the records or files of administrators in a network database. An upside-down tree with each member's information as a branch connecting to the tree's owner can be used to depict this paradigm. Trajectory behaviours include logging in, signing out, and jumping between online pages. In terms of behaviour, trajectory behaviours are the most general and fundamental. The behaviour of a student retrieving a certain sort of resource falls under the resource learning and trajectory behaviour categories. Trajectory behaviour differs from resource learning behaviour in that the former contains the search's fundamental content, while the latter comprises recovering the action. Both students' and teachers' knowledge is considered in the development of this method. Students can learn about their academic progress and educational history and overcome difficulties in their knowledge base. In this model, both students and teachers are taken into consideration. The student knowledge base is accessed to learn more about your academic achievements and educational background. Identifying and correcting students' mistakes and shortcomings are key diagnostic components. To maximize development in science teaching

and impact students' scientific understanding, science teachers and their teaching should rely on local and worldwide resources, support structures, and networks. Teachers use the teacher model as a framework for managing all aspects of teaching in a school or educational context.

Figure 4 shows the process of machine learning in network education. Teaching English is an approach that requires students to interact with others, exposing them to a variety of viewpoints. This personal factor differs greatly from the self-taught English language learning technique. Even if a teaching assistant and a modest amount of time are used in English classes, not all students can engage with one another and get responses. With the Internet and an effective English education module, these issues can be resolved.

In addition, students who have access to the Internet can see, read, and listen to media and other information online. The English teaching module includes various modules: user module management, course module management, assessment module, communications module, and resource management module. The purpose of the user management module is to verify a user's identification. In addition to providing information about the course, the administration module oversees the teaching process. The learning effect is being measured, and student model status is being updated due to the assessment module. Students can use the intercommunication module to obtain adaptive learning and engage in online study groups.

Several aspects make up this model's English education course: (1) students of online preparation get a solid grounding in the fundamentals of English language instruction. The content of the preparation can be generated via a suggested framework for students. (2) The teacher teaches English on a one-on-one basis, and a student profile suggestion framework can be used to build the content of the analysis. (3) AI examines the inefficiency of the English education system and considers a machine learning approach for English instruction.

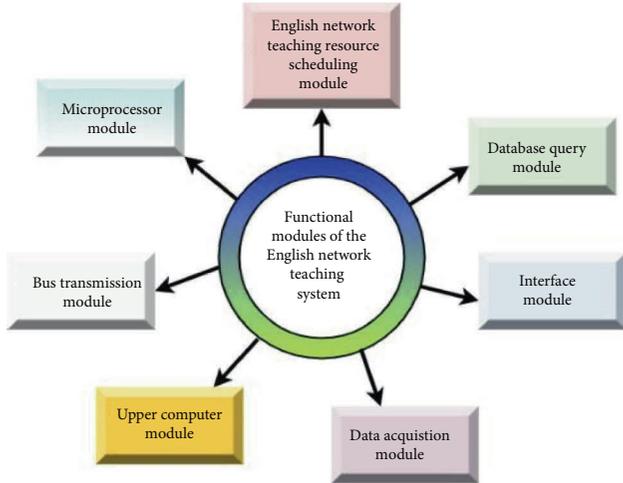


FIGURE 5: Operational component compositions of the English network education system.

Data similarity and conceptual depth are directly linked in English network teaching resource information Tjn retrieval, which is given by the following equation:

$$Tjn(u_1, u_2) = \frac{dep(u_1) - dep(u_2)}{|dep(u_1) + dep(u_2)|} \quad (6)$$

As shown in equation (6), u_1 and u_2 have conceptual depths $dep(u_1)$ and $dep(u_2)$, respectively.

Differentiated fusion $M + 1$ is performed considering the variations in the breakdown of information resources in English network instructional materials. English network teaching resources information is referred to as $CCS_{T(m)}$ distributed scheduling model, which is defined as follows:

$$CCS_{T(m)} = \sum_{m=0}^{M+1} T(m)c_{l,u,d}^*(m). \quad (7)$$

As shown in equation (7), m denotes a multiple regression statistical analysis and is used to examine the $c_{l,u,d}^*$ data statistics of English network teaching T resources.

English network teaching resource scheduling at the time has a BUH_Y slot allocation autocorrelation function, which is described as follows:

$$BUH_Y = \frac{1}{p \times q} \sum_{x=1}^q \sum_{y=1}^p H_Y(x, y). \quad (8)$$

As shown in equation (8), the grouping node (x, y) of English network transmission and scheduling is measured by H_Y and the time window width of time-division multiple addresses is measured by p and q .

Development of the system's functional components and interface has been completed. Figure 5 shows the operational component compositions of the English network education system. The most significant functional modules are the database, information processing, integrated control, human-computer interface, and back-end program loading. Online degrees and courses have emerged as a feasible option for students who want to continue working while

attending school in the last decade. A web-based method for teaching English is called the English teaching network. One of the most important modules in the English teaching network system is the automatic generation of test papers, which piques students' interest and encourages them to learn independently. It is now possible to combine education with cutting-edge information technology to construct an educational network teaching system because of the huge surge in Internet use. The English network teaching system's data output queuing technique is defined at the subscription layer. An intelligent platform can be controlled through cross-compilation and human-computer interface design. The data collection module gathers information about the original educational material. Massive data-collecting technology is used to upload English instructional materials. The interoperability of network teaching is improved with the use of radiofrequency technologies. Among the most critical elements are the database, information processing, integrated control, human-computer interface, and loading of back-end programmes. English network education system data output queuing techniques are defined at this subscription layer.

A network communication module is required to realize network information transfer and online communication functions. The Internet and 4G communication technologies are used for network communication. The material disseminated in each educational area is connected through the Internet. On the OpenStack cloud computing platform, an information sensor network is developed. The OpenStack cloud computing platform is used to build an information sensor network. The English network teaching system's network design incorporates object storage and data mining, a resource information service, and a remote call to offer feedback. Classroom design options are as varied as the courses and programmes intended to teach. Classrooms, laboratories, lecture halls, and other physical learning settings are not the sole components of a learning environment. Information about students' traits and educational goals will also be presented. Statistical and artificial intelligence methods are employed to analyze data, while English and instructional web apps are offered in full and easy combination. Multidimensional variables have the potential to improve your English communication skills.

As a function of web-based technology, the network architecture for the English network teaching system is created with object storage and data mining as well as a resource information service and a remote call for providing feedback on the educational experience's quality. It includes an information-gathering unit, a database of instructional resource information, a network application server, and an organizational structure. Interface access control enables QoS management and network security evaluation. The Internet of things is used to build the network adaption layer's middleware.

Modules in an online course usually include material and exercises arranged to provide students with a clear learning path. Without a microprocessor, students are unable to perform anything on the computer. The microprocessor performs various arithmetic and logical processes when

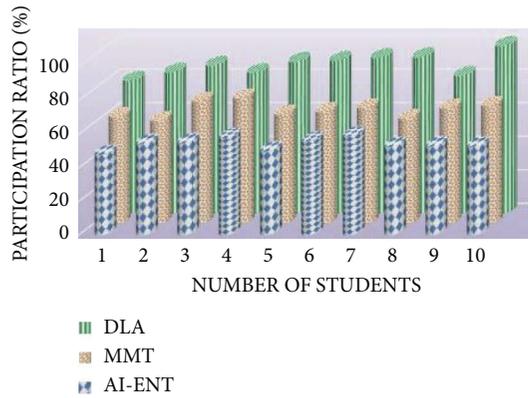


FIGURE 6: Participation ratio.

given input before outputting the desired results. Curriculum and student-level determine the exact content as well as activities. Still, most educational modules feature knowledge about a subject, emphasize student-centred learning, and conclude with a project that allows students to show their comprehension. Students use home computers to access online education, which is a sort of instructional teaching supplied over the Internet to them.

Online degrees and courses have increased in popularity over the past decade as a viable choice for a broad spectrum of nontraditional students, including those who wish to keep working while they go to school. Students can learn and research computers. Students can utilize the Internet to obtain relevant information for their projects and assignments. They can get assistance from other students by storing and organizing their research materials on computers. Most school buses utilize automatic gearboxes that can be manually shifted between gears. Transmitting is the act of teaching something to someone else by telling, demonstrating, and guiding them purposefully and consciously. The proposed method enhances the participation ratio, interaction ratio, efficiency ratio, resource utilization analysis, and performance ratio.

4. Numerical Outcome

Artificial intelligence (AI) advancements in school English teaching have fueled the school's present education reform and progress. Combining the advantages of traditional education with network teaching through online learning has become a crucial development guideline for information age education development. This study examines the usage and impact of artificial intelligence (AI) in English education and various teaching methods to help students learn more efficiently.

Figure 6 shows the participation ratio. Teachers and students can be more involved with this mobile technology, which improves teaching quality and quantity. Students' attitudes toward homework and its role in the educational process have been transformed with the distance English learning platform. Student login and passwords could only be obtained through an online learning network, requiring a registration request. They attended courses and completed

TABLE 1: Interaction ratio.

Number of students	DLA	MMT	AI-ENT
10	48	64	76.5
20	42.4	63.5	82
30	57	60	78.9
40	59.7	75	84
50	47	63	77
60	52	73.8	92
70	54	65.5	92.3
80	49.7	73	93
90	51	71	89.3
100	56	74	96.4

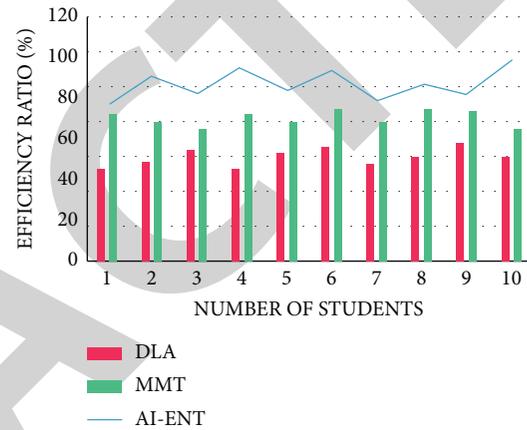


FIGURE 7: Efficiency ratio.

their assignments online, all while using smartphones. Enrollment rates are somewhat higher because more students turn up than miss class.

Compared to other methods, the proposed strategy is more effective (95.3%). Online English learning and mobile aspects are part of students' engagement in this course. Providing support, benefiting directly from the teaching, and implementing it into the classroom as an all-encompassing social and emotional environment are all part of the process.

Table 1 lists the interaction ratio. An important part of online education's usefulness and quality can be attributed to interaction. An online English education paradigm is to be delivered through the many available levels of contact. Students can discuss various topics in an open forum through social media while enrolled in an online English course. The quantitative data for this research have been gathered using an interaction and satisfaction survey.

Compared to MMT and DL's existing methods, the proposed method improves the interaction ratio by 96.4%. Students can utilize online discussion forums to get help with difficult course ideas if they find them difficult to grasp. The best way to convince people is to use language to participate. Using online forums to engage students and make them more eloquent helps students build communication skills that they can carry when they leave the classroom.

Figure 7 shows the efficiency ratio. Compared to DLA and MMT, the suggested AI-ENT system is more efficient for

TABLE 2: Resource utilization analysis.

Number of students	DLA	MMT	AI-ENT
10	61	61	79
20	72	72	84
30	68	68	88
40	78	78	83.7
50	75	75	90.3
60	62	62	91
70	79	79	92.7
80	71.8	71.8	93
90	85	85	82
100	76	76	97.2

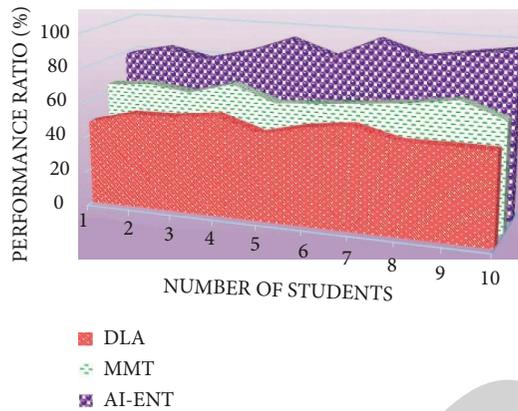


FIGURE 8: Performance ratio.

evaluation. Specifically, it is about the relevance and efficacy of student achievement in study groups and their role in increasing everyone's learning. This can be shown in several ways, including the construction and distribution of learning tools, assisting other students, managing online conversations, and substantially affecting groups. Therefore, it is argued that one can acquire social communication and good educational quality by contributing well to a whole learning community.

Table 2 lists the resource utilization analysis. The learning network includes essential learning environments, resources, and services to facilitate self-study and cooperative English learning. Complete use of educational materials refers to students' utilization of all educational resources. It reflects the state of the student and is linked to their online learning achievement. A 97.2% improvement over the current approach is achieved. In most cases, the more tools they use, the more invested they get, and the more they learn about the subject matter. Among the network learning platform's components are a learning site and software. Figure 8 shows the performance ratio.

Students' motivation and self-esteem are increased by online English learning because it encourages higher-level cognitive talents. Everyone can benefit from community activities that demonstrate the subject to expand learning opportunities and improve social and interpersonal skills. Academic performance is influenced by students' perceptions of the world around them, according to research. It had

been utilized more often by students with higher grades, whereas students with lower grades used the platform less frequently. AI-ENT outperforms existing MMT and DLA approaches in terms of performance ratio (98.3%). It is ensured that students are given high-quality tasks to evaluate their academic progress and identify areas, in which they need more assistance. Using this method, students can discover areas for improvement and work on them. Motivation and self-confidence boost students' desire to learn. The suggested method evaluated the participation ratio, interaction ratio, efficiency ratio, resource utilization analysis, and performance ratio.

5. Conclusion

The artificial intelligence-based English network teaching (AI-ENT) method has been transformed using wireless connections for distant learning. It can be included in the creation of a system for teaching English over a network. Multidimensional information points represent English memory and learning as a multidimensional variable in AI systems' expert knowledge. Machine learning algorithms are used in the learning process when the human brain's forgetting rule becomes apparent in analytical preparation. This creates a framework for students to develop their knowledge, provides expert support, and serves as the foundation for an online learning platform. The teaching module provides a set of interpretations to guide such methods and activities to allow for a wide range of teaching techniques and activities. A network teaching system for mobile distance learning and a network teaching system for mobile distance learning have been developed in the Internet mobile terminal. The experimental outcome of the proposed method boosts the participation ratio of 95.3%, interaction ratio of 96.4%, efficiency ratio of 98.8%, resource utilization analysis of 97.2%, and performance ratio of 98.3%.

Data Availability

The dataset can be obtained from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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