COLLEGE GUIDE TO
THE STUDY OF ENGLISH LITERATURE

Dr. Kanupriya Verma

College Guide to the Study of English Literature

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BOOKS ARCADE
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CONTENTS

CHAPTER 1

GENETIC ALGORITHM TO FIX THE COLLEGE ENGLISH COURSE SCHEDULING: AN OVERVIEW

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ABSTRACT:

In this study, a more advanced evolutionary algorithm is created to address the multi-objective scheduling issue for college English classes. First, it is suggested that a variable-length decimal coding scheme that fully takes into account the flexibility of the classrooms and time arrangements of the course and makes the scheduling issue more reasonable be used to satisfy the same course that can be scheduled at various times, in various classrooms, and over a variety of teaching weeks per week. Second, a problem-specific local search operator is created to quicken the algorithm's convergence. Finally, the selection operator, crossover operator, and variation operator are enhanced within the context of optimum individual retention. Experimental evidence shows that the proposed method not only has a quicker convergence speed but also, to a certain degree, increases individual variety to broaden the search space and depart from the local optimum. According to research, the modified genetic algorithm outperforms the conventional genetic algorithm in terms of average fitness value and time. The conflict issue of scheduling college English lessons is simultaneously and successfully resolved by using the biggest fuzzy pattern algorithm, which enhances the college English lesson scheduling solution. The study for this paper has enhanced the management system for scheduling college English courses, as well as the fulfilment of education and teaching plans and the reasonable allocation of teaching resources.

KEYWORDS:

Evolutionary, Fitness Value, Genetic Algorithm,Flexibility.

INTRODUCTION

A major force in intelligent education and teaching work, particularly in the area of lesson planning, which has seen increased use in recent years, computers have emerged as the foundation of many work applications thanks to their excellent performance, such as strong processing power and quick computing speed. When using computers to rationally plan and schedule various courses, it is possible to swiftly fulfil various limits and, as a consequence, provide workable solutions. The scheduling problem seeks to rationalise each teaching task, or course, in accordance with the semester's teaching schedule, as well as school resources and teachers, in order to maximise school resources, teachers' ability to teach rationally, and students' ability to learn effectively. Crossover and variation, two genetic processes in the genetic algorithm, have a direct impact on how successful it is as a whole. Individuals in the population evolve iteratively through genetic operations, and changes in their crossover and variation rate values are influenced by the degree of population dispersion or concentration as well as the size of the population [1], [2]. Genetic crossover and variation operators themselves are adaptive. The size of the variation rate value directly affects the number of newborn populations in the population; the larger the value of the variation probability, the larger the value of the size of the newborn population, and the greater the possibility of the algorithm juggling; the amount of population size increases as the crossover rate value increases, but it also results in an increase in the chance that the more outstanding individuals in the population are destroyed.

With a rise in the school's teaching scale, which is not directly proportional to it, the difficulty of scheduling courses grows exponentially. The timetable problem, which is the core issue in scheduling, is a significant area of operations research. A mathematical model based on the scheduling is developed via the study of the scheduling issue in order to debate the solution and its existence, although the intended outcome has not been reached. The scheduling system can now use heuristic algorithms thanks to advancements in science and technology. Graph theory, greedy algorithms, simulated annealing methods, backtracking algorithms, etc. are examples of heuristic algorithms. Scheduling issues may be effectively solved using heuristic algorithms, which advances the research of scheduling issues. The number of students has continued to rise, the number of restrictions has continued to rise, the amount of teaching resources is evidently inadequate, and the application of conventional algorithms is insufficient to address the challenging scheduling issue. The final fitness function is established by analysing the school's teaching plan and creating a mathematical model for allocating courses, with the appropriate function being constructed in accordance with the soft restrictions in the constraint criteria. The standard genetic algorithm is enhanced at the same time as an enhanced adaptive genetic algorithm is created to address the scheduling issue. Additionally, the scheduling conflict issue is resolved using the maximum fuzzy pattern approach. The maximum fuzzy mode method may be used to resolve scheduling conflicts, and experiments demonstrate that, compared to the conventional genetic algorithm, the enhanced adaptive genetic algorithm greatly improves scheduling efficiency [3].

The purpose of this study is to develop a scheduling algorithm based on enhancing the current artificial intelligence algorithm and for the scheduling problem, which applies to the current scheduling principles and can not only make reasonable arrangements for large-scale scheduling data but also increase the productivity of the scheduling staff and lessen redundant workload. Therefore, the use of computer scheduling has the benefits of time and labour savings, high quality, and efficiently reducing the laborious scheduling duties, which plays a significant role in the development and construction of universities that are information and intelligence-based. In conclusion, the scheduling issue based on genetic algorithms has made considerable progress, however the following advancements are still needed: A perfect solution objective should be established for the scheduling problem because, because the genetic algorithm is random, the scheduling leads to the conflict of constraints. Researchers typically take into account fewer solution objectives for the scheduling problem and the evaluation of class schedules in the actual teaching process is complex. Many researchers study the scheduling problem only based on the single schedule of the course but fail to relate the scheduling problem to the scheduling problem in actual teaching, such as the scheduling of different times and cl Due to the stochastic nature of genetic algorithms, the conflict of constraints arising from scheduling should be detected in time, and the constraints are interrelated, so the conflict characteristics should be fully considered and solved There have been more advancements in the genetic algorithm's coding structure, initialised population scheme, and genetic operations, but no researchers have been able to propose a local search algorithm for the scheduling problem to speed up convergence and enhance the genetic algorithm's spatial search capabilities[4], [5].

Learning is an energetic process of physical and mental integration, and learning fatigue is an inevitable phenomenonthat is related to the psychological quality of students and is also the result of the influence of many external environments. For instance, the school should design the curriculum so that the courses of various kinds are arranged in such a way that they complement one another. Barkaoui proposed that although scheduling involves many different aspects, four main levelsthe curriculum level, teacher level, student level, and classroom levelplay a dominant role. Barkaoui further proposed that scheduling should be carried out in accordance with scheduling principles that are helpful in enhancing students'

learning efficiency. In order to enhance student learning and maximise teachers' teaching effectiveness in the classroom, Gabi proposed to adhere to the principles of psychology, pedagogy, and health based on students' psychological and physiological factors and teacher factors. In order to achieve "people-oriented", "focus on efficiency", "difficult to stagger", "efficiency-oriented", and balanced distribution, Lin proposed that the scheduling process should use system thinking, by understanding the school, teachers, students, and other related situations. Nourmohammadi-Khiarak analyzed the key factors affecting class scheduling in colleges and universities, such as the instability of full-time and external faculty, the lack of student awareness of course selection, and the limited classroom resources, and proposed the scheduling model of "teaching parallel classes" for public basic courses based on the premise of the complexity of class scheduling in colleges and universities [6], [7].

These scheduling systems mentioned above are less adaptable because they have slow response times and can even reach deadlocks when the amount of input and the developed constraints reach a certain amount. Instead, it is more common to first perform automatic scheduling before making manual adjustments to the unreasonable parts of the results, and the manual adjustment is not any less work than rearranging all the courses. In light of this viewpoint, these scheduling technologies do not adequately assist the scheduling staff when there is a big volume of scheduling data. As was previously noted, a great deal of study has already been done on the scheduling issue. As a result of this substantial research, numerous heuristic methods have been utilized to address the scheduling problem in recent years. The simulated annealing technique, expert systems, ant colony algorithms, and other commonly used methods are used to solve the scheduling issue. The scheduling issue has drawn the attention of many scholars, and many researchers have improved genetic algorithms to better fit the needs of the scheduling problem. In Vannucci, the analysis and design of the fitness function are carried out from five elements, such as course session time slot superiority and course day combination degree, in the scheduling issue based on a genetic algorithm.The goal of this study is to provide a genetic algorithm-based approach to the scheduling issue that provides an optimum solution. First, the solution objective of scheduling is expressed using a mathematical model that represents the experience of faculty schedulers in the scheduling problem and the scheduling principles that are present in teaching work. Next, the coding scheme, initialized population scheme, scheduling conflict detection, and elimination, genetic operation, and local search operator are designed for the genetic operation. To show the usefulness and efficacy of the modified method, the algorithm is simulated. The standard genetic algorithm is enhanced to design the coding scheme to meet the actual scheduling requirements, the initialization population scheme to meet the course day interval arrangement, the genetic operator for the best individual retention strategy, and the local search operator to speed up convergence and enhance searchability[8], [9].

DISCUSSION

A kind of search algorithm with a high level of unpredictability, genetic algorithms are a computer programming method based on the notion of biogenetics. In the biological world, the fittest people are chosen based on the principle of survival of the fittest. A population is made up of different individuals, and via ongoing natural selection, new individuals that are able to adapt to their surroundings are created. When using genetic algorithms, researchers only need to use continuous "natural inheritance" to choose the best solution to a variety of complex data structure problems, first genetic encoding, in the particular implementation process of the code to manipulate, and do not need to analyses and study all the characteristics of the problem to be solved in detail. Natural selection's rules are used to the search process. The key characteristic of the genetic algorithm is that it encodes the model and parameters of the particular problem, for example by turning the problem into structural objects like sequences, matrices, and chains, without needing to specify that the function

must have continuity or depend on gradient information. Additionally, it is not required to adhere to any set criteria but rather to direct the search based on certain probabilistic change circumstances. Despite some unpredictability and blindness, it has a higher capacity for global optimisation by using a sensible technique.

The genetic algorithm is represented by a specific encoding that maps to the problem's state space and the algorithm's encoding space, which is heavily influenced by the problem's conditions and the encoding scheme's design, both of which have an impact on the genetic operation. This is because the genetic algorithm's optimisation process is applied to the coding space corresponding to a particular coding scheme rather than the problem parameters themselves. As a result, the design of the coding scheme is one of the most significant factors affecting the algorithm's performance and efficiency. The accuracy and effectiveness of problem-solving are significantly impacted by binary encoding and different encoding lengths. The problem's answer is represented as a binary string in binary encoding and a decimal string in decimal encoding; therefore, the length of the encoding will have an impact on the algorithm's accuracy and take up a lot of storage space. Real number encoding, which is frequently used in high-dimensional complex optimisation problems, represents the solution to the problem as a real number, which eliminates the impact of encoding on the accuracy and storage space of the algorithm and helps to optimize the introduction of pertinent information in the actual problem.

The initial population, which is a subset of the issue's solution space, is the collection of all solutions that genetic algorithms use to execute genetic operations from several provided answers to produce new solutions while looking for the best solution to a real problem. A high-quality starting population is a solid assurance that the genetic algorithm will ultimately provide a favourable outcome since it has a significant influence on the evolutionary efficiency of the algorithm. On the solution set, the genetic algorithm will apply genetic operations like selection, crossover, mutation, etc. The set of chosen solutions creates a new population after each generation of inheritance, and the subsequent generation of the population is created by the ongoing reproduction of the new population.To recombine part of the structures expressed by the two parental genes to create new people, the crossover probability is adaptively altered. Following the selection process, for instance, each person may couple up randomly two by two to make five crossover pairs. At this point, 10 chromosomes are accessible, and if two rows of parent chromosomes are randomly switched, two new kids are produced right once. The improved adaptive crossover operation meets the requirement that the adaptive crossover probability varies with the size of the fitness value of the individuals in the population, increasing when the average fitness value is larger than the fitness value of the individuals; and decreasing when the average fitness value is smaller than the fitness value of the indiv The adaptive adjustment of the crossover probability uses the variation of two numbers generated by a random function, such as the variation of the time and teacher code in the schedule, to improve the algorithm's ability to search globally during the evolution of the previous population, avoiding the phenomenon of early convergence of local search, and saving the previous good individuals to the next generation. Crossover and variation have an impact on the genetic algorithm's performance, and the adaptive variation probability's size is dependent on crossover probability rather than having a set value. The adaptive variation probability rises when the crossover probability value is low; conversely, when the crossover probability value rises, the adaptive variation probability value falls. These two operationsadaptive crossover and variationcooperate to guarantee the genetic algorithm's capacity to search globally for the world's best answer.The first population is created by a random search in the basic genetic algorithm, and the initial solution is developed by a genetic operation that is not particularly successful in terms of individual fitness. The effectiveness of the genetic algorithm is somewhat influenced by the size of the original population. The efficiency of the algorithm will decrease if the initial population is

too large, and the overall computation time for the large algorithm's execution will increase. In contrast, if the initial population is too small, the diversity of the population will decrease, the sample capacity will decrease, and the algorithm's overall performance will be subpar, which will easily result in the algorithm's premature termination and the phenomenon of premature convergence. If the value of the resultant individual fitness is too low at population initialization, all solution spaces will contract proportionally, and the outcome will be a locally optimal solution rather than the global optimum.

Since the academic scheduler's analysis indicates that scheduling classes in the morning can help students learn more effectively, although this is only a consideration in terms of time, the academic scheduler schedules the first class on Tuesday and Thursday for the weekly class number 2. The simulated manual scheduling example above demonstrates that, despite the faculty scheduler's thoughts and more rational and scientific approach, scheduling outcomes may be improved and are influenced by a variety of soft restrictions. It may be discovered that the mathematical model of the scheduling issue is similar to combinatorial programming after replicating the mental process of manual scheduling. Constraints that are both adequate and required for the best possible combination of solutions are the foundation of the conventional method for addressing combinatorial planning issues. Although theoretically possible, the combinatorial planning issue is very difficult to solve in practise since there are an increasing number of combinatorial solutions as a result of numerous causes.

Evaluation of English City Scheduling in High Schools:

The scheduling process starts with the teaching plan, which is why the academic affairs department in charge of scheduling gathers data on the courses each teaching unit will be offering in the next semester before the conclusion of each semester. courses, class size, course topics, weekly credit hours, total credit hours, course type, instructors, classroom style, and prerequisite course grades are the primary components of this data. The academic affairs department will assign teaching assignments to each teaching unit and create consistent arrangements in accordance with the school's instructional resources after summarizing the information from the courses. The number of classes offered and the courses each instructor teaches are shown in this graph. In order to avoid name ambiguity for instructors, it is necessary to not only clarify their name but also to specify their phone number. For instance, certain instructors should not be placed in high-floor courses because they are pregnant or physically unfit. Instead, these classes should be designated with a specific marker that reads 0 for no exceptional circumstances and 1 for teachers who are pregnant or physically unfit.Two ideas about classrooms must be understood: administrative classes and instructional classes. Teaching classes are administrative classes where the same curriculum needs are combined into a collective class, and the teachers of the classes are primarily responsible for the teaching and management of students. Administrative classes serve as the basic unit of the school and will be managed by the counsellors of each administrative class. An administration class may be a part of various teaching classes in addition to including at least one teaching class[10], [11].Genetic algorithms' main focus is on how to abstract the real issue for coding, in this example, encoding the teaching job in the scheduling issue. Grey encoding and binary encoding are both often employed; however, the scheduling issue has an intuitive encoding that is simple to comprehend. In this study, the decimal variable-length coding system is used to the scheduling issue. The courses that need to be scheduled and the teachers who will teach them are decided before the start of the class, which is reflected in the teaching schedule, even though there are instances in actual teaching where a class is taught by more than one teacher and one teacher takes more than one course at the same time. As a result, the classroom and instructional time may be specified as the same variable as the course, instructor, and class. The classroom number in the classroom

information table may be used to represent the classroom and any associated information; the teaching time is made up of the teaching day, the first week of the course, and the last week of the course.

Only two serversthe database server and the application serverare needed to enable the scheduling function in the network needed for the automated class scheduling system in higher education. Due to varying user privileges, only academic administrators have access to the database server, thus students and professors must utilize the application server to obtain the data information when they need it. When designing the network of automatic class scheduling system in colleges and universities, it is also important to take into account that teachers and students may use mobile devices to log into the system for operations like viewing class schedules. This is because the Internet has developed and mobile devices continue to be popular. Teachers and students may access the college automated class scheduling system over the Internet, and security tools like firewalls are also required to ensure the security of programmes and data.The system begins with user login, reads user information after a successful login, keeps track of the number of failed login attempts, and logs users out of the system if a login attempt is unsuccessful more than three times in a row. Once the user has successfully logged in, it is determined if they are signing in as a regular user or a system administrator by reading their information and putting it together with the authorization data they provided. The user has the right to edit personal information and to query and export the scheduling results as needed if they are deemed to be "normal" users. You can carry out any tasks if you are a system administrator. The system administrator is primarily in charge of two management functions in the automated class scheduling system developed in this paper: the authorization to control class scheduling and the capacity to manage class schedules.

To find out whether the account already exists in the database, the administrator's account is queried and checked. If a record has already been saved, the system will move on to the next step and wait for the user to enter their name and password; if no record has been saved, it will create a new administrator user for the logged-in user and then prompt them for their login information. It is required to examine the input material to see whether the data submitted is accurate once the login user enters the user name and password. The system has three chances to rectify wrong information submitted by the user before performing an automated exit operation and returning to the initial system login page. If incorrect information is input three times in a row, the system will execute an automatic exit operation.When the data submitted by the system administrator is accurate, it will request that the schedule management task be started and enter the system to carry out the necessary function. To explain the teaching material and task goals, the Academic Affairs Office will first issue the teaching assignment for the current academic year. This is how the unique management method is realised. The teaching assignment is delivered to each faculty on this premise to determine the unique teaching needs for each semester prior to the issuance of the teaching tasks since the number of students, classrooms, teachers' resources, and training programmes vary for various majors and grades. Before the commencement of each semester, the teaching assignments will be fairly changed in accordance with national rules, school conditions, graduation circumstances, etc. Each college sets forth a number of requirements for the teaching tasks, such as whether experimental courses need to be scheduled, whether there are unique requirements for teaching locations, etc. Each college arranges the corresponding teachers according to the appropriately adjusted teaching assignment based on the specific actual training programme and teaching needs, etc.

Results of Improved Algorithm Performance:

Genetic algorithms are a type of evolutionary algorithms used in search technology for general optimisation problems like scheduling and curriculum arrangement. However,

evolutionary algorithms and its branches use random search methods and heuristic calculations, so genetic algorithms also use heuristic calculations and search methods. Numerous optimisation scheduling issues with significant computational complexity have surfaced in real-world applications. Noncontinuous, nondifferentiable, nonconvex, multipeak, and ambient noise are all possible characteristics of the objective function. It is not appropriate to utilise conventional analytical approaches to tackle this kind of complicated schedule optimisation issue under the class form, and using the standard search calculation method to do so will also provide several challenges.The objective of the local search operator developed in this research is to hasten convergence and improve local searchability. The original population may be deemed to have better outcomes in the later genetics if it can have a higher value of fitness function after the local algorithm since this study employs the best individual retention technique. Because we currently only want to consider the use of local search operator for this initialization of 200 chromosomes for the experiment, experiments for the local search operator performance analysis are only conducted after initialising the population, conflict detection, conflict removal, and local search operator operations. Genetic operator operations are not performed. With 100 chromosomes in each population, displays the fitness values for the initialised populations with and without the local search operator.Because there is some unpredictability in the initialised population, using the local search operator does not ensure that the fitness of each chromosome is greater than it would be with the initialization without the local search operator. When numerous chromosomes' average fitness values were examined, it was discovered that the fitness values of the initialised population's chromosomes utilising the local search operator were marginally greater than those of the initialised population.It can be seen from the observation and analysis that the standard genetic algorithm converges at approximately 600 generations; in the literature, it enters convergence at approximately 800 generations; despite the slower convergence speed, the fitness function value is significantly higher than that of the standard genetic algorithm; the improved genetic algorithm designed in this paper converges at approximately 350 generations, and it has the characteristics of Due to the local search operator's optimisation of the local search for various solution goals in the particular scheduling issue, the enhanced genetic algorithm developed in this study converges at 350 generations and has quick convergence and strong global search capabilities. Both the global and local search capacities serve as measures of the algorithm's success.

In contrast to the local search capacity, which can examine a particular issue from a local perspective and develop a better solution algorithm based on the current solution, the global search capability refers to the ability to identify the best answer in a worldwide context. The local search algorithm developed in this paper is dependent on the solution space for search because in practical problems, the result value frequently has many extreme points in the set of all search spaces and it is simple to fall into local extreme points, in which the local optimal situation is described above.This is as a result of this algorithm's local search architecture and improved genetic operator. College counsellors typically do not have the same major or even the same grade, so the objective function of "easy for counsellors to listen to lectures" is probably different from the objective functions of "classroom seat utilization rate," "staggered course nature," and "English class schedule," causing the algorithm in this paper to have a slightly lower fitness function value than the other two algorithms. It's possible that the target function of "easy for counsellors to listen to lectures" conflicts with others, such as "classroom seat utilization rate," "staggered course nature," and "English class scheduling time," etc. The weight value of the function may be adjusted to raise the value of the objective function "easy for tutors to attend lectures," however doing so may also lower the value of other objective functions.

Both algorithms are fairly similar in terms of the availability of instructors for one day of the teaching week, according to the study of the scheduling results from the viewpoint of the

teachers. One of the courses in the literature has 8 hours, which is somewhat better than the method in this study, but the teacher's daily class hours cannot exceed 6 hours. The two methods' differences are not appreciably different when scheduling results are analyzed from a class viewpoint. The scheduling outcomes of the textual scheduling algorithm, however, may be shown from the following points to be more concentrated on student learning effectiveness. First, the scheduling of courses is improved by utilizing the time with a high degree of superiority in the class period; next, the courses in the adjacent time are staggered and the classrooms are close to one another; second, it is more logical to arrange the physical education courses in the seventh and eighth periods; and finally, for the first time, the scheduling results of the algorithm in this paper do not result in more courses at the beginning of the semester. For example, the courses included in this paper are courses with 2, 4, and 6 hours per week. To upgrade the scheduling scheme for different weekly courses, we simply need to add the corresponding teaching time and classroom positions in the designated positions in the code. The course interval priority table and the interval priority table have similar designs. The schedule may be adjusted after it has been created to account for the current circumstances; for instance, certain instructors may prefer to teach at a particular hour. The appropriate gene bits in the chromosome may be changed directly since the coding is clear and simple to comprehend thanks to the decimal coding scheme, and conflict identification and conflict removal can then be carried out.

Results of the System Performance Test SchedulingThe purpose of the so-called load stress test is to determine how many users can be active at once, how much data can be handled by the system, and how long it will take for everything to return to normal. The LoadRunner professional testing tool is used to evaluate the monitoring of access to the system during the smart selection and scheduling process by changing the number of users logged in each time. This is done as part of the load stress test of the smart scheduling system. It is a challenge and a test for the concurrent user capacity of the scheduling system when a course selection activity is conducted and the course is popular because many students will log into the system for course selection at the same time once the system is launched. The maximum number of concurrent users chosen for submitting teaching evaluation data is 900 in this paper's intelligent scheduling system, which has a maximum target online user count of 3000 users and determines how many users are available for normal login access based on the number of concurrent users of 30% of the system online. Results of stress load testing. Access the system. Access the system. A mechanism for evaluating teachers. A mechanism for evaluating teachers.According to the results of the system stress test, when there are less than 100 users logging into the system, the logging success rate is 100%; however, when there are more than 200 users concurrently logging into the system, the logging success rate is only 95%, and there is a problem where access is denied when a small number of users log into the system. For teaching evaluation, the success rate of data submission reaches 100% when the concurrent number of logged-in users is less than or equal to 400; it reaches 97% when the concurrent number of logged-in users is greater than or equal to 600; and it drops to 90% when the concurrent number of users is greater than or equal to 9 hundred.

One of the scheduling performance metrics is the intelligent scheduling system reaction time. System reaction time is the amount of time it takes for the computer to respond to an input or request from the user and provide an output. The number of system users must be taken into account when calculating system response time; when this number is high, the system response time is necessary to achieve high speed; otherwise, it is not assured that all system users will be able to accept the system response time. This study uses a user/browser architecture for the intelligent scheduling system. When the user opens the browser for access, the system's page loading cache time, data transfer time, and execution time, among other factors, will have an effect on how quickly the system responds. The system test results will also be influenced by the various setups of individual users' machines, the network's

responsiveness, the kind of accessing browser being used, or different iterations of the same browser. The results of the intelligent scheduling system performance operation indicators. These are objective influencing factors; these influences will be reduced to a minimum while controlling the system processing time as much as possible, and compressed to the shortest possible time[12].

CONCLUSION

The genetic algorithm is enhanced by analysing the conventional genetic algorithm in conjunction with the real requirements of college English curricula. First, coding is done using the decimal coding technique. The courses are ranked in order of course weight and instructor status before the first population is formed. Premature generation of the local optimum solution is accomplished by the application of adaptive crossover and mutation processes. Finally, by experimental research, the enhanced genetic algorithm has significantly improved in terms of fitness value and time efficiency. The maximum fuzzy pattern algorithm is introduced, its associated terms are defined, and the elements necessary for the item header table of the maximum fuzzy pattern tree are given, along with the maximum fuzzy pattern mining algorithm, through the analysis of the conflict problem of the college English course arrangement. Studies demonstrate that the biggest fuzzy model tree can properly identify and resolve conflicts in a collegiate English class setup. The experiment still has several limitations, despite the enhanced genetic algorithm producing some results: First off, the data size and computation quantity are both quite little compared to the college English course layout. The second is that when arranging college English courses, the multicampus issue is not taken into account. Therefore, in order to enhance the college English curriculum system, it is imperative that future research efforts seek a greater scale of data while taking the issue of numerous campuses into account.

REFERENCES

[1] R. L. Johnston, “Evolving better nanoparticles: Genetic algorithms for optimising cluster geometries,” *J. Chem. Soc. Dalt. Trans.*, 2003, doi: 10.1039/b305686d.

[2] M. S. Brown, T. Bennett, and J. A. Coker, “Niche Genetic Algorithms are better than traditional Genetic Algorithms for de novo Protein Folding,” *F1000Research*, 2014, doi: 10.12688/f1000research.5412.1.

[3] E. Cantú-Paz and D. E. Goldberg, “Are multiple runs of genetic algorithms better than one?,” *Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)*, 2003, doi: 10.1007/3-540-45105-6_94.

[4] V. N. Wijayaningrum, W. F. Mahmudy, and M. H. Natsir, “Optimization of poultry feed composition using hybrid adaptive genetic algorithm and simulated annealing,” *J. Telecommun. Electron. Comput. Eng.*, 2017.

[5] J. Yang, R. Zhang, Q. Sun, and H. Zhang, “Optimal wind turbines micrositing in onshore wind farms using fuzzy genetic algorithm,” *Math. Probl. Eng.*, , doi: 10.1155//324203.

[6] B. Boucher and S. Jenna, “Genetic interaction networks: Better understand to better predict,” *Frontiers in Genetics*. 2013. doi: 10.3389/fgene.2013.00290.

[7] C. Caleshu and E. A. Ashley, “Taming the genome: Towards better genetic test interpretation,” *Genome Medicine*. 2016. doi: 10.1186/s13073-016-0325-9.

[8] E. Fox, J. McCuaig, R. Demsky, C. Shuman, D. Chitayat, M. Maganti, J. Murphy, B. Rosen, S. Ferguson, and S. Randall Armel, "The sooner the better: Genetic testing following ovarian cancer diagnosis," *Gynecol. Oncol.*, , doi: 10.1016/j.ygyno..03.057.

[9] M. S. Dawkins and R. Layton, "Breeding for better welfare: Genetic goals for broiler chickens and their parents," *Animal Welfare*. 2012. doi: 10.7120/09627286.21.2.147.

[10] E. Varela, M. A. Muñoz-Lorente, A. M. Tejera, S. Ortega, and M. A. Blasco, "Generation of mice with longer and better preserved telomeres in the absence of genetic manipulations," *Nat. Commun.*, 2016, doi: 10.1038/ncomms11739.

[11] J. M. Yáñez, S. Newman, and R. D. Houston, "Genomics in aquaculture to better understand species biology and accelerate genetic progress," *Frontiers in Genetics*. . doi: 10.3389/fgene..00128.

[12] E. Marshall, "NIH seeks better database for genetic diagnosis," *Science*. 2013. doi: 10.1126/science.342.6154.27.

CHAPTER 2

A FUZZY NEURAL NETWORK-BASED STUDY OF COLLEGE TEACHERS' ENGLISH TEACHING QUALITY ANALYSIS

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ABSTRACT:

The government is currently devoting greater attention to the assessment of teaching quality in many universities and colleges, and research on English teaching quality evaluation is becoming more important. The purpose of this research is to look at how a fuzzy neural network might be used to evaluate the quality of English instruction. The analysis of the model NN research and the assessment of the quality of English instruction come first. An algorithm known as a fuzzy NN evaluates the quality of English education using ambiguous criteria. According to the case study data, the previous assessment of teaching quality was between the intermediate and intermediate level, whereas the research on the assessment of English teaching quality based on fuzzy NN indicates that the evaluation quality is between the intermediate and advanced level. Therefore, combining Fuzzy Rules and NN approaches may significantly enhance the effectiveness of evaluating college professors' English instruction. The analytical processes of the assessment of excellent teaching may be made simpler in college English teaching by FRs, who can also properly assess the evaluation's quality and provide assistance in its development.

KEYWORDS:

Consequence,Dominating, Productivity, Universities.

INTRODUCTION

The dominating property of artificial intelligence, which allows electrical or mechanical equipment or robots to carry out jobs that are solely meant to be performed by humans, makes it an intriguing study field. This field has undergone a number of sub-divisions throughout time to increase the productivity and accuracy ratio of the systems that have been created. Numerous organisations have granted funds to encourage real-time initiatives like how the AI-enabled robot may be made to act like regular people. These systems have been widely used in a variety of academic fields. Along with such initiatives, AI has been used consistently in the field of education, for example, by enabling computers or other devices to directly comprehend various languages, just as humans do, and respond to queries. One of these areas where AI-enabled technologies could be able to enhance the teaching skills of a regular instructor is the quality of the instruction provided in the institution. Fuzzy NN and FRs were created in the literature for this purpose.Previous techniques of evaluating the quality of English education in colleges were restricted to simple procedures like comparison and assessment. The university administration found it challenging to assess the quality of English instruction in the prior review of teaching quality, and the findings' accuracy was quite poor[1], [2]. As a result, the use of FRs to assess the quality of university English teaching evaluation reduces its intensity and complexity, enhances its accuracy, and offers a solid foundation for the evaluation of the teaching evaluation's overall quality.

Intelligent algorithms provide up-to-date evaluation techniques for universities and colleges, increase the accuracy of evaluation results, and raise the standard of college English teaching assessments. As a consequence, assessing the quality of a college English education is an

organised, rational, and rigorous process. An inescapable need for English teaching innovation under the reform of education is intelligent evaluation of the quality of English instruction. To successfully complete a job in English teaching, it is essential to continuously raise the intellectualization level of the assessment of English teaching quality.The following are the innovations of this paper: describing the theoretical knowledge of fuzzy NN and English evaluation of quality teaching research and using the fuzzy NN algorithm to analyse how the fuzzy NN contributes to the research of English evaluation of quality teaching; and examining the traditional methods of English teaching in universities and colleges and the research on the quality of English teaching evaluation based on fuzzy NN. The case's outcome demonstrates how fuzzy NN-based research on the quality of English teaching assessment may advance the growth of English instruction in universities and colleges.The remainder of the essay is structured as follows.

The future section, Related Work, which is a summary of the related works that have previously been published, has been detailed. We have defined and given the fundamental description of fuzzy NNs in Section 3, along with the methods used to raise the quality of English instruction. We provide FR-enabled fuzzy NN to address the aforementioned problem with the least amount of overhead. An entire section is devoted to the suggested mechanism as it is put into practice to describe the observations of the different outcomes. Finally, a thorough discussion of the suggested strategy has been completed[3], [4].The study of English assessment of excellent education is now gaining importance due to the development of clever algorithms. According to Jackson, the effectiveness of teaching, the effectiveness of English learning, and other evaluation outcomes of the evaluation of quality teaching are all significantly impacted by the assessment of English evaluation of quality teaching at every college and university. There has to be a significant improvement in the accuracy with which English instructors evaluate the caliber of education. To examine English instructors' actions in the assessment of teaching quality, others have suggested an FR-based quality assessment method for English teaching evaluation. It is hard to determine whether the English teaching assessment quality examination system complies with the standards, however, since the researcher has not made this clear. LakhnoV offers a method for evaluating the quality of English teaching assessment with an intelligent support subsystem to enhance the quality of English teaching assessment and investigate the strategies for assessing the quality of English teaching assessment. The validity and reliability of this strategy are debatable, nevertheless, since the researcher has not been supported by a particular instance. BuczakA believes that the best way to assess the effectiveness of English education and get positive outcomes is to combine machine learning and fuzzy NN methodologies. The assessment of English education is made more challenging by the fact that machine learning and fuzzy NN approaches have their drawbacks and cannot be adequately analyzed. The opinions of the experts described above are too general to adequately characterize the procedure for assessing the effectiveness of English education and the precise metrics. To better properly measure the quality of English teaching assessment, SheuJJ analyses the elements that influence assessment quality and computes the correlation between influencing factors using FRs. The fundamental driving forces and the extent of the association are not discussed, but he thinks that there is a tight connection between English instruction and quality evaluation. To analyze the quality examination of English teaching assessment, CzibulaIG proposes the notion of merging FRs and NNs. To analyze the quality assessment of English teaching evaluation, CzibulaIG presented a fuzzy extension rule, a more intelligent FR, such as Apriori's method, and integrated the FR with the NN. However, the researcher did not do particular case validation and was unable to demonstrate the method's stability, therefore his results are not convincing. Because FRs are often used in AI algorithms, ZouC offers an algorithm based on FRs and assesses the system's performance using a case study. After the FRs are added to the algorithm, the calculation result of the NN is improved. Some researchers have not examined certain

circumstances or verified particular facts. CanU claims that traditional optimization techniques are ineffective in resolving complicated optimization problems. As a consequence, the Iterative Search algorithm and fuzzy criteria are used to study how well English training is assessed. This program may search the teaching evaluation database of English assessment of excellent instruction for outcomes that adhere to FRs. Additionally, FRs are highly applicable, which may raise the bar for study on how well English is taught. The system automatically modifies the range value while FRs are being studied, making FRs more adaptable and more following the demands of English assessment of quality teaching research. According to NasereddinH, it is unnecessary to continually search the teaching assessment databases of English teaching assessment quality when FRs and NNs are combined. Additionally, FRs might save lots of time as compared to the earlier techniques. In conclusion, while researchers both domestically and internationally have proposed several theories about the quality of English teaching evaluation, neither the FRs nor the NN model have been specified, nor have any relevant case studies been carried out, rendering the findings untrustworthy [5], [6].

DISCUSSION

Chinese universities have entered the age of standardized assessment of the quality of English teaching due to the fast development of intelligent algorithms and the growing quantity of research on the subject. The quality examination technique of intellectualized teaching assessment is essential in the process of intellectualized analysis in universities and colleges.there is now a contemporary idea of how well English teaching is evaluated, and intelligent analysis has been added to how well English teaching is evaluated in universities and colleges. The intelligent technique is based on the contemporary intelligent calculation theory of assessment of the quality of the English teaching method, while the conventional analytical method is based on prior experience in evaluating the quality of the English teaching method. shows the results of a thorough study using past English teaching data. The collection of enormous amounts of data may increase the spatial precision of calculations. The previous deep analysis approach was unable to analyze the enormous amount of data effectively. In universities and colleges, evaluating the quality of English instruction is still done using a traditional analytical technique. This approach is unreliable and has a direct impact on how well teachers are evaluated. Researchers must review the caliber of studies utilizing fuzzy NNs for English education evaluation in order to properly overcome these problems.The advent of massive volumes of data and the growth of the Internet have led to a dramatic rise in the number of databases used to evaluate the quality of instruction, making the process of teaching assessment more time-consuming and challenging. Critical information from vast amounts of data may be found using the fuzzy NN algorithm.

This paper performs a thorough analysis of English teachers and teaching data using the fuzzy NN algorithm, uncovers patterns, conducts a better study on the evaluation of teaching quality in universities and colleges, enhances the standard of teaching evaluation, and fosters the overall advancement of English teaching in universities and colleges, the fuzzy NN is shown.illustrates how the fuzzy NN assists English instructors in extracting important data from the teaching assessment database as well as conducting a thorough analysis of the information and forecasting future trends in teaching assessment quality examination.Interactive networks are used in the assessment of teaching quality. In order to accomplish the depth and breadth of college English teaching and to support pertinent academics in continuing their study and analysis, the quality assessment of teaching evaluation in universities and colleges should also keep up with the times in order to increase the reliability of the results, evaluate teaching quality in accordance with teaching requirements, and implement the necessary safeguards, assessors must encourage the development of teaching quality examination in universities and colleges .

A comprehensive analytical technique called a fuzzy NN mixes the correlation between a number of assessment indices from a vast quantity of data. As the quantity of information in the teaching evaluation database expands, English instructors are placing more and more emphasis on thorough examination of pertinent results.A Case Study on the Assessment of the Quality of English TeachingThe goal of this research project is to raise the level of instruction generally and English specifically in colleges and universities. Additionally, the system must undergo a thorough review based on a variety of performance evaluation criteria, particularly those that are significant for the issue area[7], [8].Analysis of Various Evaluation Techniques for College English TeachingFuzzy NN has the benefit of allowing for thorough analysis of the evaluation results of English teaching quality, accurate evaluation results of teaching quality, improved teaching effectiveness, identification of a relationship between the evaluation results of teaching quality and English teachers, and simplification of the evaluation of teaching quality. The number of English majors in universities and colleges has doubled, and the interdisciplinary growth of several fields has increased the demands on students to become teachers. In universities and colleges, the question of how to assess the effectiveness of English instruction has become more and more popular. Universities and colleges need to adjust to these changes, assess the effectiveness of English instruction, and provide remedies. Universities and colleges now often construct clever, thorough analyses to address the aforementioned issues.

The growth trend of intelligent comprehensive analysis teaching quality assessment in colleges and universities in 2015 and 2017 is examined in this study and is shown.Universities and colleges are increasing their expectations for teaching efficacy, and they put a high emphasis on English education. The assessment of teaching quality in the reform of college English instruction will be more effective and scientific if intelligent methods are used.This study contrasts the effectiveness of earlier studies on assessing the quality of English instruction with that of utilising FRs. It is critical in the realm of education to effectively use the fuzzy NN information that has been gathered in universities and colleges to support the decision-making of those who assess the quality of instruction. For many years, universities and colleges have gathered a vast amount of data for the assessment of educational and instructional quality. We can effectively improve the accuracy of English teaching quality examination results and obtain better learning quality examination feedback if we can fully utilise the potential value of the data from English teaching quality examinations. This will contribute to improving the standardisation and scientific nature of teaching quality examination in universities and colleges.NN's educational impact FR Model-based Research for the Evaluation of English Teaching Quality

It takes a lot of time to completely and extensively analyse the set of candidate items and to continually scan the enormous teaching evaluation database since the majority of the development of fuzzy NN techniques now is based on the prior premise.The modified FR method's datasets vary in size from 230.43 to 200.00 M, include between 95.65 and 213.04 seconds' worth of rules, and take between 82.61 and 343.48 seconds to calculate. The updated FR method has data sizes between 230.43 and 321.74 M, a number of rules between 130.43 and 269.57 seconds, and calculation times between 113.04 and 195.65 in a variety of datasets. You can observe that the teaching effect of the improved FRs is around 1% greater than that of the improved FRs, indicating that the improved FRs are not significantly impacted by various datasets.

The effectiveness of the enhanced FR algorithm and the improved FR algorithm under various fuzzy thresholds is also compared to confirm the validity of this example, demonstrate that the modified FR algorithm's maximum value under various fuzzy constraints ranges from 86.02 to 95.70, while its accuracy ranges from 89.25% to 94.62 seconds and its error rate ranges from 88.17 to 86.02. The enhanced FR algorithm's

maximum value across datasets is 96.77-100.00, its accuracy ranges from 96.77% to 100.00 seconds, and its error rate is 96.77 to 98.92. The varying fuzzy thresholds clearly have a significant impact on the improved FRs as seen by the teaching effect of the improved FRs being around 19% greater than that of the improved FRs.This study contrasts the FR algorithm's teaching effectiveness and execution time before and after improvement.The execution time of the improved FR algorithm increases with the increase in data, and the execution time of the improved FR algorithm decreases with the increase in data, as can be seen by comparing the execution time with the teaching effect of the improved algorithm under the same amount of data and different degrees of ambiguity. The enhanced FR algorithm runs faster than the enhanced FR algorithm. The teaching efficacy of the enhanced FR algorithm, however, diminishes as the amount of data increases. However, the teaching impact of the new FR algorithm is greatly improved with the increase of data.College English instruction is significantly impacted by a thoughtful and thorough investigation of the assessment and evaluation of teaching quality. The following are the primary effects:It creates a strong foundation for communication, enhances communication, and encourages communication. In order to build a communication channel and mechanism that can accurately express the views of English instructors and staff, communication is the most efficient approach to rationally execute the assessment of teaching quality in universities and colleges.Both time and money are saved. The stages may be significantly decreased by using the intelligent comprehensive analysis model. On the other hand, the intermediary connection between the assessment of the quality of the instruction and the evaluation based on an intellectually thorough analysis may be resolved in the smallest amount of time to effectively save time[9], [10].

CONCLUSION

This essay extends from FRs to fuzzy NN and elaborates on the theoretical understanding of fuzzy NN and its use in college English teaching. Its primary emphasis is the study of fuzzy NN and English teaching quality assessment. This study examines the multiangle fuzzy NN algorithm and the FRs in the approach section and applies the algorithm to a real-world scenario. The author examines the direction of current research on evaluating the quality of English education in the case section. The results show that there is now a growing body of research on English teaching quality evaluation, which suggests that this field of study has a big influence on colleges and universities. Previous college English teaching techniques waste a lot of time and have little educational value. The research method is simplified and college English teaching is more effective when using a fuzzy NN to assess the quality of English education. As a consequence, a thorough, in-depth study based on associations is essential for evaluating the quality of English teaching assessment research.

REFERENCES

[1] J.-N. Amadhila, “Factors that influence exclusive breastfeeding in Windhoek district in Namibia,” *J. Acad. Sci.*, 2017.

[2] Peraturan Pemerintah Republik Indoneisa, “Peraturan Pemerintah No. 16 Tahun 2005 Pengembangan Sistem Penyediaan Air Minum,” *Peratur. Pemerintah No. 16 Tahun 2005 Pengemb. Sist. Penyediaan Air Minum*, 2005.

[3] Nguyen B. Do, “MODELING OF FRICTIONAL CONTACT CONDITIONS IN STRUCTURES,” *Glob. dan Kebidayaan Lokal Suatu Dialekt. Menuju Indones. Baru*, 2005.

[4] L. Marcotrigiano, “Elaboración Y Presentación a Los Estados Financieros,” *Actual. Contab. FACES*, 2013.

[5] P. S. Oo *et al.*, “Australian Council for Educational Research The Leadership Challenge : Improving Learning in Schools (Conference Proceedings) Australian Council for Educational Research (ACER),” *J. Strateg. Manag.*, 2018.

[6] C. Gusnita, “Polusi Udara Kendaraan Bermotor sebagai Bentuk Kejahatan Tanpa Korban Chazizah,” *SISI LAIN REALITA*, 2016.

[7] A. M. Jimenez Gomez, “INETERACCION DEL MERCURIO CON LOS COMPONENTES DE LAS AGUAS RESIDUALE,” 2005.

[8] S. B. VÉLEZ and A, “Oxidation Kinetics and Mechanisms in HT-9 Ferritic/Martensitic Stainless Steel,” 2005.

[9] J. W. Stansell, “The Use of Music for Learning Languages,” 2005.

[10] B. V. E. Alberto, “Eficiencia energética de la caldera pirotubular COLMAQUINAS de 250 BHP de un laboratorio farmacéutico,” 2005.

CHAPTER 3

USE OF ORIENTED TEACHING TECHNIQUES TO ENHANCE THE IMPACT OF COLLEGE ENGLISH INSTRUCTION

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ABSTRACT:

The first "national standard" for my nation was published by the ministry of education in January 2018, and it was quite evident that undergraduate students' abilities needed to be given attention and improved. This study discovers that the thinking ability training techniques that may be offered in the prior research are generally dispersed, and there is a shortage of efficient training methods and guidance via the examination of the research findings in this area both domestically and internationally. Dr. Wen Qiu fang thus suggested the teaching strategy known as "production-oriented approach." The term "production-oriented approach" refers to driving, promoting, and re-evaluation, where the training material is included into each link. As a result, this research integrates training with the production-oriented approach, and the English teaching classroom may explore more effectively utilizing this theoretical foundation. It offers a fresh approach to developing English thinking skills in college students. English is taught to students in the classroom using the production-oriented teaching approach while they do their study. Following the completion of the teaching course, SPSS 25.0 is used to gather, analyze, and show the teaching data. Using the production-oriented approach while teaching English in a classroom may raise the proficiency of domestic college students as well as give a reference technique and strategy for students' English instruction.

KEYWORDS:

Affluent, Excitement, Hypothesis, Western.

INTRODUCTION

Western affluent nations have recently started to pay attention to ways to increase students' aptitude. Its theories, techniques, and system theory have become comparatively flawless after years of study. Due to the adoption of exam-focused education in China, we are preoccupied with student exam performance and detest the development of student quality. In particular, there is a severe absence of ability cultivation. The development of talent has been more appreciated in recent years by everyone. Many scholars have long held the view that "skills should be integrated into specific research projects, or combined into specific contents, rather than being taught as an independent discipline" when determining how to develop students' abilities. English writing involves knowledge linkages like logic, reasoning, and evidence, all of which must be carefully considered and connected to the subject matter. On the other hand, we also need to consider when writing, from general planning and article layout to accurate value judgment, logical justification, and other linkages. As a result, while writing, we require the capacity for analysis and critical thought. Writing is an effective approach to developing students' skills[1], [2].Production-oriented goal is to completely mobilize students' excitement and interest in learning as well as develop their psychological motivation for English writing via the utilization of demanding and socially dynamic settings. The teaching objective directs this strategy, which is output-oriented. It begins with "expression" in teaching, using carefully chosen words, integrates "learning" and "use" in teaching practice, and sublimates the whole teaching process by assessing the "learning"

phases. Learner's "use" and "evaluate" when they are "learning." Lastly, let the pupils to "express" themselves via an article. This approach to teaching English may enhance students' writing skills while also challenging their English proficiency. It may also address the existing educational system's "separation of learning and application" at the same time.In order to determine the effect of this strategy on the skill development of non-English majors, this research aims to investigate the application of output-oriented teaching methods in actual classroom instruction. The following are the primary research findings: Research topics and objectives. This study overcomes the shortcomings of no systematic teaching methods in the previous academic circles when discussing the training strategies of thinking ability and offers some references for the training of thinking ability by closely combining the training of English thinking ability with the output-oriented method and carrying out the practice based on the writing teaching.Focus on research methodology. This study innovates English classroom teaching methods by using the output-oriented teaching method, analyses how students use the learned knowledge to complete English writing in the new teaching mode, solves the problems, and finds their own shortcomings, in order to improve the students' English practical thinking ability[3].Many renowned colleges throughout the globe choose and mandate that students develop their abilities. Colleges and universities must explicitly foster their students' capacity for learning, according to China. The domestic college classroom, which is still centred on skill training, does not currently provide enough ability training. Future domestic educational growth will inevitably result in educators giving the development of abilities more and more consideration. As a result, a lot of professionals are developing new curricula, teaching strategies, and other aspects of education while also undertaking deeper theoretical study. This study uses the POA technique to conduct writing classes and searches for methods to execute training to assist students enhance their skill, based on the research of professionals.

Importance of the Research:

The importance of English in developing students' critical thinking skills has just been generally acknowledged in the field of English education in China, although there hasn't been nearly enough study in this area. Researchers have looked at the traits and common issues with students' thinking skills and noted that the English writing of pupils often lacks logic and is vacuous. However, not many individuals have looked into practical solutions to this issue throughout the history of English teaching. Due to this, a frequent problem in modern English education is how to effectively integrate the development of thinking skills into the process of teaching English in order to increase learners' thinking skills.We can tell that many instructors lack the direction of particular concepts in classroom teaching after sifting through pertinent resources and seeing certain teachers in action. This causes a divergence between teachers' classroom instruction and students' awareness education. As a result, this research will begin with the teaching of English, adopt the new ability theory model, and investigate the means of developing the ability of non-English majors based on the theoretical framework of output-oriented technique. To achieve the general growth of college students' overall literacy, we may improve the scenario in which the conventional teaching of the school places more emphasis on linguistic skills and less on thinking capacity.The Socratic style of inquiry is the foundation of critical thinking. The premise or hypothesis of a logical structure must typically be tested or questioned when using Socratic questioning. The father of contemporary critical thinking is John Dewey. Critical thinking is described by him as "a hypothetical form of knowledge that trusts or encourages trust, and it tends to make some results and give them active, persistent, and prudent consideration". His concept emphasizes how crucial it is for individuals to grasp the facts, evaluate them, and express their beliefs via thought. It's what some academics mean when they say "critical thinking," Both Dewey et al. and Bloom et al. refer to it as "reflective thinking" and "wisdom and skill". Additionally, it is a proper technique of analysing and criticizing reality. Wen supports reframing thinking as

employing the right approach, engaging in conscious thought, and drawing logical conclusions based on earlier research. She also noted that the two basic components of human thinking capacity are thinking propensity and thinking skills. With a primary emphasis on non-English majors in domestic colleges and universities, this thesis will conduct scientific study and practice in accordance with this notion and investigate methods of ability training[4], [5].

Capability Model and Theory:

In 1990, Facione proposed the notion of two-dimensional structure and noted that thinking propensity and cognitive abilities make up human capacity. Cognitive skills are the capacity to concentrate on intelligence when thinking, whereas thinking propensity relates to the thinker's critical thinking. In addition to having the capacity to think out issues, capable thinkers will also apply that capacity to pressing issues. The growth of one's abilities is significantly influenced by thinking style and cognitive abilities. They are necessary and complete one another.The theoretical knowledge framework primarily focuses on seven aspects: exploring truth, thinking openness, analytical method and logical reasoning, systematic ability, self-confidence, thirst for knowledgeability, and psychological maturity. Among these, Seeking the truth refers to the honest and unbiased state of mind when seeking the facts or the truth. It demonstrates that a person may reflect on himself and do better even when the course of action he takes contrasts with his own will and ideals.The term "openness of thinking" refers to the degree of openness in one's thinking, which includes the degree of acceptance of one's ideas in many other views as well as the degree of acknowledgment of the accuracy and correctness of one's views.

The analytical approach and logical thinking refer to the degree to which a person can identify issues from both their own and other people's perspectives. In other words, an individual can utilize evidence to address issues and forecast potential outcomes.The capacity to present ideas and issues clearly and methodically is referred to as systematic ability. Self-confidence is the capacity to pose one's queries and forward reasoned viewpoints, as well as the curiosity and confidence in one's own data analysis skills, justifications, and conclusions.Curiosity and thirst for knowledge refer to a strong curiosity in difficult and unsolved issues, a willingness to investigate their root causes and solutions, and a focus on mastery and understanding to advance continuously. Being mature entails exercising extreme caution when making decisions and having the ability to do so while maintaining objectivity and the right attitude in light of varied handling techniques.

DISCUSSION

The Production-oriented Approach was created to address the issue of "separation of learning and application," which is a constant in China's exam-focused educational model. The benefit of POA is that it is in a leading position and closely blends teaching materials with teaching techniques in students' learning. The components of this law are as follows:The first section is titled "teaching theory" and serves as the theoretical underpinning of POA, which outlines the overarching structure, instructional goals, and instructional direction of classroom instruction. "Classroom practise" is the second component. In classroom instruction, every connection between the activities' content and the lessons is examined, and difficulties are addressed with appropriate answers. The output-oriented method's third component, "teaching procedure is the primary tool and mechanism for achieving the educational objective. It serves as the primary vehicle for evaluating the application of "teaching theory" and "classroom practise" . The structure and relationships between the many components of the fundamental theoretical framework underlying the output-guiding approach are clear[6], [7].Driving, facilitating, and evaluating are the three phases of POA classroom instruction. Teachers serve as mentors at every level of the learning process. The three phases are

interrelated and work together, and there are many minor linkages between them, according to the experiment's findings. The little linkages at each step of instruction in the classroom work together and play a part continually.First off, it substitutes the usual classroom teaching sequence of "input first, then output" with "output-input" in the driving stage to encourage learners to identify current issues and identify their flaws, sparking interest in independent learning and the possibility of motivation. This is an essential step for students to take to develop their abilities and realize independent thinking, which is radically different from the conventional teaching approach. Applying the overarching theoretical framework of the output-oriented approach to the teaching of English in the classroom may help students harness their aptitude to accomplish learning goals, serving as a model for incorporating aptitude into classroom instruction and eventually developing into a teaching strategy.

This article's content aims to explore the strategies and ways of cultivating students' thinking ability by using the output lead-in teaching method in light of the phenomenon of "absenteeism" that frequently affects college students as noted by Dr. Huang Yuanshen, as well as the provisions of the most recent national standard on the development of college students' ideological core qualities and the attention paid to the development of students' thinking ability. Particular research problems includeWhat level of proficiency do English majors at colleges and universities around the nation possess?What effect does output-oriented English writing instruction have on developing students' skills?What particular tactics do English majors use to develop their abilities?The non-English major students of a regular university in Guangxi are the study's research subject. There are 178 kids in four classrooms at the sophomore middle school, comprising 28 males and 150 girls. The CET-4 exam for students in this major is set to start, and 20% of their final test scores will be determined by their performance in English. Teachers and students worked extremely closely together to conduct this study because it would help students become better academic performers. They decided that class 1 and class 3 would be the experimental classes and class 2 and class 4 would serve as the control classes after comparing the average score performance of each class because they believed the difference between the sum of the average scores of classes 1 and 3 and class 2 and class 4 is minimal.The initiative makes use of both qualitative and quantitative scientific research methods. Survey methods include general interviews and questionnaires. After coming to a decision, data analysis is done using.

The author utilized the CTDI-CV to perform the pre-and post-tests for this scientific study. 1992 saw the creation of CTDI. It is one of the instruments used to examine the seven facets of a learner's capacity for thought. Systematisation, analysis, openness of thought, seeking the truth, self-confidence, knowledge maturity, and desire for knowledge are the unique contents of the seven aspects. It was rewritten by Professor Peng MEICI to make it more appropriate for Chinese learners by taking into account home cultural practises. Students choose the matching level material in accordance with their own sentiments in order to communicate their true feelings. Professor Peng added 10 items to each of the seven aspects in the original orientation table, with each item having six standard levels ranging from "very agree" to "very opposed." The scoring range for the cognitive ability choice is 10 to 60. The cutoff point between positive and negative thinking among them is 40. For instance, a student's thinking capacity in this component is good if their score in that aspect is higher than 40. The student has poor critical thinking skills in this area if it is lower than 40. The range of student scores in the total assessment is around 70–420. The student has low competence in general classroom instruction if their test result is less than 210[8], [9]. The student's thinking is opposed to what is being taught in the classroom if their test result falls between 210 and 280. If a student has a test score of higher than 280, it indicates that they have favorable classroom learning attitudes. A test result of 350 or more indicates a very strong level of skill for the student. Preliminary Capability Level TestThis research will be carried out over eight weeks

in the second semester of the 2017–2018 academic year by a sophomore English major at a local institution. The researchers used SPSS 25.0 to conduct an independent sample t-test on the data from the experimental class and the control class to determine whether the level was sufficient before conducting a pretest on all of the students in the class to collect and analyse pertinent data on the ability level and writing level of the research object. The respondents' degree of thinking ability is also investigated and tested using the updated thinking tendency questionnaire. With a total of more than 178 copies, it has been established after the collecting and testing of this test questionnaire that it is a genuine response sheet. After doing an independent sample t-test using SPSS 25.0, it was discovered that there was no discernible difference between the two classes' skill levels , which essentially satisfies the requirements of a writing instruction experiment.

To simplify comparison and analysis in the future, the experimental class will begin with the teacher teaching using the output-oriented technique, whereas the control class will begin with the teacher teaching using the standard English method. Following a conversation with the instructor, the author determined that the primary goal of the topic is to choose appropriate target materials from teaching materials or auxiliary materials, such as those related to the physical environment, the ecological environment, classroom ideas, etc. The specific process is as follows.Data-driven connection is the first link. Before class began, the instructor instructed the class to go through the course material and locate any pertinent readings in the pro-phase. The instructor plays videos relevant to the subject for the class using multimedia technology. The instructor then probes the class deeply about their thoughts and emotions before assigning groups to debate the video's unique points of view and substance. By setting up the real-world scenario in this link, the instructor piqued students' curiosity, stoked their excitement, recognized their ignorance, enhanced the learning experience, and created a solid basis for the future improvement of classroom instruction.Facilitating learning is the second connection. For the students to properly comprehend their writing aims and plans, as well as how to effectively communicate them, the instructor assists them as they study the course subject via the supplied materials. Teachers are leaders and promoters in the writing of student "output," and they promptly respond to and deal with students' problems and questions regarding the process of student "output." Teachers also actively direct students to participate in teaching activities, and they work together to accomplish the goal of students' "output" as a group. Students should complete the following tasks in this link:The first is preparation, which may include a point of view, an argument, or logical thinking. Second, in order for the students to prepare the words, phrases, or sentences pertinent to the subject, the instructor must also allow them to prepare the discourse aspects. Give each student the option to choose from a variety of resources for their writing.Last but not least, training in the area of logical thought is often tied to the structure of the overall article content and the relationships between different fragments, which calls for instructor assistance.

The per-class preparation link can help the teacher take on a more mentoring role by assisting each student in understanding the connection between thinking ability training and reading language ability training. It can also help each student carry out thinking preparation, reading language preparation, and thinking logic preparation simultaneously so that the results of their thinking can be output in the form of writing in various languages.Assessment link. include instructor comments, network sharing, and self-evaluation from students. The instructor should assist the students in finding their own issues throughout the process of each student's self-evaluation, such as grammar and spelling mistakes discovered during the process, and actively fix them.linking mutual evaluations. Students in this site exchange thoughts and express their views. They learn about their peers' issues while also identifying their own weaknesses, which they may then fill in and rectify.Teachers provide useful criticism to students' written work in the teacher evaluation link, often in the form of

supportive words, and assist students in fixing certain errors. The aim is to assist students in regaining their self-confidence so that future instruction and practise will go more easily. This research employed SPSS 25.0 to administer the ability post-test utilising the CTDI-CV scale at the conclusion of the experimental period. The test results from the pretest and post-test are systematically analyzed in this research. To comprehend the students' emotional attitudes and acceptance of the new teaching techniques, this research employs the method of random sampling and chooses more than ten students to conduct semistructured interviews. It also offers some reference ideas for instructors' further education.This study used the SPSS 25.0 software system for data analysis and statistical analysis and explanation of the experimental data gathered from this investigation. To master the thinking ability and present level of the research object, a statistical analysis of the thinking ability and pretest results of the research object is the first of the particular contents. The SPSS 25.0 software system then used the results of the pretest and posttest between the experimental class and the control class to conduct an independent sample t-test and analyze its differences to investigate the effects of using output-oriented teaching methods on students' ability levels.All sophomores with non-English majors were examined at the start of the experiment using the CTDI-CV measurement table. Data from the students' level's pretest were collected, and the data were analysed and investigated. Because it was clear what academic level each set of students was at, an independent sample t-test was carried out using SPSS 25.0 on the data from both the experimental class and the control class. The table below provides a detailed breakdown of the test results as well as the two teams' levels.

The T-test outcomes of diverse samples are first assessed collectively.In light of the above, it is possible to determine the following conclusions by analysing the single sample t test results from the pretest: SIG average values are more than 0.05 , if there is - sig. It is the outcome based on the premise that the variance is the same, if it exists. If the value on both sides is 0.214, it means that there isn't much of a difference between the experimental group and the control group in terms of thinking ability or level, and it also means that the two groups' overall thinking levels are pretty much the same.The thorough analysis and assessment findings of the pertinent pretest questionnaires for the test group and the control group may also represent the test conclusion for the single sample.The experimental group's average scores at various levels include pursuing the truth, being open to new ideas, using analytical reasoning, being able to reason systematically, having self-confidence, having a hunger for knowledge, and being mature. Analytical reasoning, seeking the truth, systematic ability, open thinking, maturity, self-confidence, and hunger for knowledge are in order from highest to lowest mean scores. The student performed better in this area, as indicated by a higher score. The project material that stands out the most among the seven experimental components of thinking and learning capacity is analytical reasoning ability.

Searching for the truth, being able to organize things, and having an open mind all display somewhat average competence. The maturity of the seven projects is average, but self-confidence and a desire for knowledge exhibit relatively low performance and inconsistent performance levels.At various levels, the average scores for the control group were: seeking truth: 20.34; open thinking: 19.29; analytical reasoning ability: 21.06; systematic ability: 19.93; self-confidence: 19.51; hunger for knowledge: 18.75; and maturity: 20.19. The students in the control group received the following average scores, ranging from high to low: analytical reasoning; seeking truth; maturity; systematic ability; self-confidence; open-mindedness; and hunger for knowledge. The students in the control class perform best in seven areas, as can be seen from the table above: analytical reasoning, seeking the truth, maturity, for a relatively good performance; systematic ability, self-confidence, and open thinking for a relatively general performance; and thirst for knowledge for a relatively poor performance. However, in contrast to the experimental class, only in the three aspects of analytical thinking, seeking truth, and maturity has the control class achieved a somewhat

positive level, with the others having done the opposite.In addition to performing different degrees of mean statistics on the students in the two courses, this research also conducts a separate sample t-test on the pretest results of the two classes to contrast their various levels of force. The value in each sub-plan for both the experimental class and the control class is greater than 0.05, indicating that there is no obvious difference in the ability levels of the two research objects and that all of the experimental conditions are met by both classes of students participating in the project. However, based on the level evaluation criteria of the adapted version previously mentioned, we can see that the average score of each subject in the control class and the experimental class is 21.16 and 21.06 in the analytical reasoning subject; in addition to the analytical reasoning, the scores of the two classes are slightly higher than 20 in the level of seeking truth and maturity; however, in the two dimensions of open-minded and systematic level, the score of the experimental class is higher than that of the control class. Other disciplines have a difference in aptitude between the two groups of roughly 15-20 points, which is considered paradoxical. There is a pressing need for and difficult job of teaching pupils English thinking skills.This experiment administered the pretest and posttest of thinking ability to the experimental class and the control class once more before the conclusion of the new semester and utilized SPSS 25.0 to finish the analysis.

The outcome of the independent sample t-test is evaluated generally first.The results of the independent sample t-test for the two groups, SIG. The absolute values are equivalent to 0.05. Inferring that the variances are equal is thus valid. The average result for both sides is 0.022, showing that in the capability post-test, the talent level between the control group and the test group clearly differs, i.e., their overall talent level is highly different. The results of the independent sample t-test are as follows based on the analytical assessment of the ability level post-test results for the experimental group and the control group.When comparing the results of the pretest for thinking ability, it can be seen that there isn't much of a difference between the experimental research class and the control group, and the score gaps in the various dimensions are likewise extremely modest. Nevertheless, the experimental class' post-test conclusion is more noticeable than the pretest conclusion in the post-test, particularly in the three dimensions of open thinking, analytical judgement ability, and systematic knowledge. The experimental class's scores have improved in comparison to the pretest conclusion by 3.31 points, 3.8 points, and 4.24 points, respectively, and its average score has improved by 17.06 points overall.On the other hand, the control group's score, which was assessed as having an average score of 3.21 points, grew considerably in the systematic ability component. In addition, the scores for the other dimensions did not considerably rise, and even the score for the maturity dimension fell sharply.

Although the impact is not very strong, the overall score is just 5.995 points higher than the ability pretest score.Seven discrepancies between the pupils in the practise class and the control class were examined using the independent sample t-test. The data findings demonstrate that each data sample exhibits different features in seven dimensions, i.e., each data sample differs in seven aspects.Furthermore, the average score of the experimental class is considerably higher than the overall average of the control class across all aspects. This means that after using the output-oriented method to carry out the thinking ability and teaching experiment, the students' thinking ability level in the experimental class is significantly higher than that of the control class. At the same time, the average score of the total score of the thinking ability test of the experimental class is 159.51, which is also significantly higher than the total average score of the control class by 145.07. It also demonstrates the need of including the output-oriented teaching approach into the classroom experiment in order to develop students' capacity for thought.After the teaching experiment was over, we immediately chose 10 research subjects from the experimental class, interviewed them using the teaching plan, and then recorded and analysed the interview's content. The following are the findings from the interview. Eight students believed that there

were issues at first because the new teaching method required more from them in terms of word quantity and cognitive reserve, making it challenging to keep up with the teacher's rhythm initially. However, the new teaching method encouraged their participation and enthusiasm, allowing them to quickly adjust to the teaching method and rhythm.Five students believe that task-driven connections are of particular interest since they may encourage students to broaden their thinking, brainstorm, and quench their appetite for information. According to two students, the facilitation link might aid in students learning more about the topic's social context and language as well as how the instructor writes about related subjects. The remaining students believe that the comment link is the most rewarding because, following the teachers' and students' comments and self-assessment network sharing of content, the students have a better understanding of their own capabilities and areas where they are prone to error. As a result, they will be more serious and rigorous in their subsequent writing.Each student responded positively when asked about their increase in thinking skills, stating that they learned to approach issues from several angles and that this helped make their difficulties more thorough. Some students discover that their word and knowledge reserves are inadequate, which restricts their capacity for critical thought and academic writing. Some students feel that the method will help them utilise their skills more effectively and that it will significantly raise their writing level.

Question 4: Students who score poorly admit that there are challenges in utilising their capacity to accomplish. It primarily results from two things: a limited vocabulary and a limited comprehension. Students often struggle to explain their thoughts clearly in their writing due to a lack of vocabulary. Because of the unknown issue of creation, the application of thinking abilities might sometimes prevent the production from moving along smoothly.The students believe they have improved much in their ability to write in English, according to the final question concerning the review of this semester. They are now more eager to acquire the terminology and resources linked to the writing subject thanks to the new teaching approach. The students' thinking has expanded as a result of group discussions, and self-evaluation and network sharing have helped them to better grasp where they are academically. By looking at the interview's conclusion, we can see that the respondents are quite complimentary of the instructional strategies used in the teaching experiment, highlighting how these strategies are fresh and enjoyable and may pique students' interest in learning. At the same time, it may encourage students to actively utilise their cognitive abilities to reason through issues and discover solutions, as well as to further identify how they vary from others in order to better learning[10].

CONCLUSION

To conduct the English teaching experiment, this research uses a production-oriented teaching strategy. Following the completion of the comparative analysis of empirical data and the outcomes of the pretest and posttest, this research makes the following recommendations. English majors at regular colleges and universities often score 142.45 in the practise class and 139.08 in the control institution on the pretest for thinking ability. The students in these two classes demonstrated a relatively active level of analytical and reasoning activities, while the weaker ones were self-confidence and intellectual curiosity, despite the fact that the difference between the two is not great and some scores are at contradictory levels.The average ability of the experimental class and the control group in the classroom instruction experiment did not vary significantly. However, the post-test results of the ability of the experimental class and the control group revealed that the experimental class's overall average score and degree of improvement were greater than those of the control group. As a result, the progress in college students' professional English teaching level is greatly impacted by the development of output-oriented teaching methods.

REFERENCES

[1] D. McCloskey, “Other Things Equal - Economical Writing: An Executive Summary,” *East. Econ. J.*, 1999.

[2] D. S. Bernatal Saragih, Ika Karyati, “PENGARUH PEWARNA EKSTRAK CAIR ALAMI BAWANG TIWAI (Eleutherine americana Merr) TERHADAP MUTU SELAI KULIT PISANG KEPOK (Musa paradisiaca Linn),” *J. Tenknologi Pertan.*, 2010.

[3] A. Chi Lee, “Acceptance and Commitment Therapy: A Mindfulness and Acceptance-Based, Value-Driven Approach to Human Flourishing With Christian Spirituality Considerations.,” *Accept. Commit. Ther. A Mindfulness Accept. Value-Driven Approach to Hum. Flourishing With Christ. Spiritual. Considerations*, 2018.

[4] K. Neubert, “Hyperacusis - manifold experiences of the same phenomenon?...1st WORLD TINNITUS CONGRESS AND XII INTERNATIONAL TINNITUS SEMINAR 22-24 MAY 2017, WARSAW,” *J. Hear. Sci.*, 2017.

[5] A. Harkins, M. H. Bernent, S. Hunter, A. Kaugars, and S. Stolzman, “Relation Between Health, Wellness, and Academic Achievement in Adolescent Females...ASAHP 2016 Annual Conference, October 19-21, 2016, New Orleans, Louisiana,” *J. Allied Health*, 2016.

[6] T. Heidenreich, A. Noyon, C. Grober, and J. Michalak, “Ziele, Werte und Sinn: Grundlagen und ihre Bedeutung in der aktuellen Verhaltenstherapie = Goals, values and meaning Principles and their importance in current behavior therapy,” *Psychotherapeut*, 2017.

[7] W. Schrankler, “The value of occupational therapy,” *Ergotherapie Rehab*, 2013.

[8] S. C. Hayes and J. Lillis, “Introduction,” in *Acceptance and commitment therapy.*, 2012.

[9] M. Vaneva and M. Ivanovska, “Pragmatics of English Speech Acts: Compliments Used by Macedonian Learners,” *Int. J. English Linguist.*, 2018, doi: 10.5539/ijel.v8n5p272.

[10] S. U. Smith, S. Hayes, and P. Shea, “A critical review of the use of Wenger’s community of practice (CoP) theoretical framework in online and blended learning research, 2000-2014,” *Online Learning Journal*. 2017. doi: 10.24059/olj.v21i1.963.

CHAPTER 4

INTERCULTURAL TEACHING TECHNIQUES FOR COLLEGE ENGLISH: IDEA OF TEACHING FOR FUTURE

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ABSTRACT:
Higher standards have been proposed for English instruction in China as a result of global integration and the advancement of science and technology. A high level of English proficiency in cross-cultural communication as well as a great capacity for self-learning are critically needed by society. The "Teaching for the Future" philosophy encourages the use of technology as a teaching and learning instrument. The fast development of network information technology has given rise to several novel educational models in the context of the "big data" age. This research develops a novel cross-cultural teaching model for college English based on the SPOC teaching model and performs trials with two randomly chosen classes of the same grade at a university. The outcomes of the experiment reveal that students' interest in studying English culture grows along with their capacity for interaction and teamwork. As a result, SPOC's combination of network technology and future education will help to advance the teaching of English across cultures in colleges and universities.

KEYWORDS:

Advancement, Global Integration, Incorporated, Philosophy.

INTRODUCTION

A worldwide training program called "Intel Teaching to the Future" was created by Intel to assist the efficient use of computer technology in the classroom. The curriculum is student-centered and practical. Teachers use technology in instructional activities as a tool for teaching and learning, allowing students to make good use of the skills and information they have acquired in class. As shown by the educational model contemporary information technology has been thoroughly incorporated with this educational philosophy into China's present educational model. It has altered the traditional teacher-centered teaching approach while also assisting students in developing their 21st-century information literacy skills and inquiry-oriented learning. The Teach to the Future idea of education is extremely different from the conventional Chinese educational philosophy. The challenges were mostly concerned with "innovation and exploration."

The Teach to the Future model's implementation procedure makes extensive use of the benefits of learning theories including constructivism, contemporary humanism, and multiple intelligence theory. According to this school of thought, wisdom is more significant than information, practical skills are more significant than grades, and procedures are more significant than outcomes. Students' intercultural awareness and competency are heavily emphasized in light of society's ongoing growth and the advent of global integration[1], [2]. The students' intercultural communication skills are reflected in their listening and speaking abilities, which were only listed in the "Course Requirements for College English Teaching" as an essential evaluation subject. Teach to the Future's restrictions, however, focused on developing pupils' capabilities, particularly intercultural communication ability. This idea is more beneficial to students' advancement and is in keeping with the objectives of China's new curriculum reform.The SPOC approach uses top-notch digital resources like MOOCs to accomplish course teaching goals and raise teaching standards via instructors' blended online

and offline English teaching and learners' independent engagement. The creation and invention of SPOCs are MOOCs. The benefits of offline classroom instruction and online self-learning are simply combined in the blended teaching paradigm that it promotes. It focuses on various learning objects, implements various teaching materials, and accomplishes various teaching objectives. The course learning is conducted using SPOC English learning, which also incorporates flipped classroom characteristics. This article offers guidance to instructors on how to use heuristic teaching in the classroom while concentrating on outlining the course's main knowledge structure. To realize the integration and complementarity of each link before, during, and after teaching and accomplish the purpose of course teaching, this study may direct students to finish the course material online via independent learning, collaborative learning, and inquiry-based learning.

By completely utilizing contemporary information and communication technology, instructional Informa ionization is the process of fully merging the conventional teaching mode with the new teaching mode. It eventually supports the coordinated development of student's physical and mental elements while also enhancing the effectiveness of educational information transmission and feedback. Network information technology has a revolutionary influence on the development of education, and we must pay close attention to it, according to China's "National Long-term Education Reform and Development Plan Outline " . Another key method for advancing China's progress from a large education nation to a strong education country is to encourage the widespread deployment of information technology in curricular teaching.Massive Open Online Courses, a novel kind of network teaching, are an illustration of how network information technology has affected classroom instruction. Armando Fox and David Patterson introduced the research method known as SPOC in 2013. It is the most recent and often regarded as the most efficient learning method since the advent of information technology. It was created in response to the debate surrounding MOOCs and takes its basic structure from the MOOC lecture videos or online assessments that support in-person training in regular classrooms. SPOC is a hybrid learning approach for college students that combines classroom teaching with face-to-face coaching while using MOOC videos as homework assignments. Even though the speed and openness of the MOOC attracted a lot of students, it was a failure. The quick and free nature of MOOCs does not optimize education, which is why SPOC was created.

Due to the delayed commencement of the research on cross-cultural college English teaching, the initial English course overemphasized the usefulness of English. We disregarded the crucial part that English plays in communication. We became aware of the significance of developing compound English abilities and turned our focus to teaching English across cultural boundaries as a result of society's ongoing growth and the advent of global integration[3]. The "Course Requirements for College English Teaching" contain an essential evaluation of the students' speaking and listening skills. Cross-cultural education may teach students about the distinctions between China and other nations while also enhancing their social language proficiency and cross-cultural communication abilities, according to the Guidelines to College English Teaching. In addition to creating customized cross-cultural communication courses to meet individual requirements, colleges and universities may also include cross-cultural communication into regular English classes. Students' global views, language proficiency, cross-cultural communication abilities, and cross-cultural awareness may all be improved via methodical instruction. The course might focus on cross-cultural communication using language and cultural expertise or it can be a broad English course with pertinent Chinese and foreign cultural information. Therefore, college English intercultural teaching has improved to some level as a result of the ongoing growth of college English teaching. Due to the impact of conventional teaching approaches, there are still certain issues in the teaching process.After conducting a literature review, we proposed three fundamental system foundations for the development of multicultural college English teaching. The

cognitive system comes first. China's colleges and universities should aggressively update their English curricula, place a stronger focus on students' overall English ability, and actively update their teaching methodologies. From a cross-cultural standpoint, objectives for teaching English should incorporate students' intercultural communication ability. The development of pupils' cross-cultural sensitivity should be emphasised in English classes. Students will be better able to comprehend how people think, see the world, and express themselves via language in the context of many cultures thanks to this. To raise students' understanding of cultural tolerance, we must help them completely comprehend the distinctions between Chinese and Western cultures as well as the reasons behind such disparities. The emotional system is the second. In order to increase their cross-cultural awareness, students should not only have a thorough grasp of English culture, but also pay greater attention to Chinese culture and actively study two-way cultural knowledge . Teachers should aggressively promote the ideas of cultural inclusiveness and equality among their pupils before helping them to enhance their intercultural communication abilities. The behaviour system comes last. College English instruction should include innovative teaching strategies and provide the intellectual foundation for the development of students' intercultural competency. We must focus on integrating English culture and expertise while developing creative teaching tools, as well as enhancing their usefulness. To increase the quality of English teaching, colleges and universities should strengthen their cross-cultural training programs, as well as their intercultural awareness and intercultural teaching skills[4], [5].

DISCUSSION

The most recent teaching model, SPOC, combines conventional teaching techniques with notions from the future of education due to the fast growth of network information technology. Based on face-to-face instruction, it reforms contemporary teaching via the use of network technology to accommodate ideas for future education. Building a cross-cultural teaching paradigm for college English based on SPOC is thus crucial for study.We initially analyzed the main components of the teaching model before developing the SPOC-based course design model for college English intercultural teaching. The task-based approach to teaching languages will predominate in the classroom, and curriculum-based computer-assisted teaching strategies will predominate. Blackboards, PPTs, and projectors will still be seen as key conventional teaching tools while the model's teaching tools will combine new and classic media, such as the e-learning site "China University MOOC," APPs, and WeChat Group . Teaching effectiveness is assessed by teaching assessment based on learning goals. The standard formative assessment is the main emphasis of this paradigm. The model assessment will be more rigorous due to the excellence of the SPOC online platform and new social media.To test the effectiveness of the model's implementation, we conducted a comparison study with a second class and implemented the SPOC-based college English intercultural teaching model in one of the courses used for teaching experiments. A was the control group, while B served as the experimental group. 48 pupils are in the control class and 40 are in the experiment class. The ideal score, which has been stratified by every ten points, is 100 points, using their cumulative scores in college English as a pretest.

The precise distribution is shown.We randomly chose the same number of students from both courses to serve as samples for the experimental class and the control class, according to the number of students and particular scores in each of the experimental class and the control class. We chose one person from the 90-99 fractional segment, one from the 80-89 fractional segment, eleven from the 70-79 fractional segment, seven from the 60-69 fractional segment, four from the 50-59 fractional segment, five from the 40-49 fractional segment, and two from the 30-39 fractional segment. 31 persons made up each class. We used a questionnaire survey to get to know the students in the experimental class following the demands of the prior

implementation conditions for students and the learning environment. We gave 40 students in the experimental class questionnaires on the "Student Network Literacy Survey" and the "Online Learning Accreditation." The recovery rate was 100%, with 40 valid surveys being retrieved. That the majority of students utilise mobile devices within two hours for online learning. Through interviews, we discovered that every kid in the class had a computer, a smartphone, and a personal account on the largest social networking site. They had a solid foundation in e-learning literacy.

Task Analysis of the Experimental Process.the task study time has been split into two parts: during class and after class.In class, students raise queries. In order for pupils to engage in the open classroom, teachers will divide the class into groups based on the various circumstances of the students and encourage them to voice their ideas. Teachers will then present the network platform and resources to the pupils for self-learning. During the guided class, each task group will provide a question, and each group may choose to use the questions posed by other groups as task themes to debate the tasks. Each group of students will present the planned task's concept using any format, including a PPT and a discussion form.Following the completion of the first study, the instructors create activities for real-world situations by combining the MOOC curriculum base with English culture.The task's outcomes will be presented to the class, and each student will be assessed individually. The groups will assess one another during the fifth and sixth classes, when the students present their work outcomes. Students utilise ubiquitous learning tools to carry out independent study outside of class. On the one hand, students engage in independent study using a range of learning material and learning APPs. Conversely, students communicate with professors using a variety of social media platforms.

The students will examine their language and grammar skills and complete language activities before discussing and evaluating the task's outcomes with their peers. Teaching assessment and teaching reflection are the two key activities instructors must do after instruction. These are, respectively, summative and formative assessments. The outcome of the last test serves as the reference standard for the summative assessment. The formative assessment is the focus of this paper's primary analysis. Student self-assessment, student peer review, and instructor evaluation all contribute to the formative evaluation. Students compile a summary of their educational experience and turn it in to the professors for assessment. After finishing their assignment, each group in the task study process will evaluate the work of the other groups. The completion of the assignment, performance of the student in class, and participation in the SPOC online assessment platform serve as the teacher's evaluation criteria.The independent sample -test results show that sig is less than 0.05 at 0.035.

This demonstrated a substantial difference between the experimental group and the control group's English test results. The experimental group's average score was higher than the control group's average. Thus, by using the SPOC-based college English intercultural teaching paradigm, students' total English proficiency and learning effectiveness may be raised. Three months were spent on the experiment[6], [7].We administered a "learning feedback survey" for students following the trial to better understand their attitudes towards the new SPOC-based teaching approach and online course design. They were given 40 feedback forms, and 40 valid forms were returned, making the recovery rate 100%. Data reveal that 85% of students preferred the SPOC-based teaching approach, which suggests that the trial outcomes were quite successful. In order to assess the students' attitudes regarding this course, we also conducted interviews with 20 students using random sample techniques following the course. Only one student indicated his opinion that using a mobile device for online entertainment makes it difficult to focus on studying. He is not pleased since he thinks this model's ability to educate is ineffective. Based on the findings of the surveys, case interviews, experimental data, and classroom observations, we came to the conclusion that

the execution of this teaching model was usually good. The educational benefits of this teaching strategy were also calculated.According to the survey findings, 62.5% of the students said they were happy they took part in the experiment. More than half of the students feel that their knowledge has increased, their capacity for autonomous study has increased, and their ability to communicate culturally in English has improved as a result of the Internet and classroom combined learning. Only around 50% of the students, however, agreed that the "new teaching model improved their academic performance". The precise information is as follows: 70% of students think that the new approach to teaching and learning improves their proficiency in English. Due to multiple communication assignments and the implementation of diverse topics, 65 percent of students feel that they have practised their cross-cultural communication skills throughout the learning process 63 percent of students think that this new approach has significantly increased their motivation to study English and stoked their enthusiasm in doing so.To gain teaching experience, we implemented the new model of construction to two courses at a particular college in Anhui while developing a college English international teaching model based on SPOC. After the course, we evaluate the students in our teaching practise using the SPOC platform's online quizzes and discussion board. We play the role of a facilitator in class to direct students towards work completion and provide questions to encourage communication. Through after-class cooperation, after-class practise observations, SPSS result analysis, and questionnaire analysis, we discovered that students were engaged in learning English and that they liked the new model The new approach also fosters students' multicultural communication abilities while enhancing student-teacher engagement[8], [9].

Interviews with students confirmed the findings of the quantitative analysis, demonstrating that the new teaching model enhanced learning effectiveness and self-learning capacity while also identifying certain issues that should be taken into consideration when developing new teaching strategies.The new teaching approach is helpful for monitoring students' learning, but it has to use a range of techniques to increase students' attention. Some students said that SPOC may lengthen learning time by reducing class time, allowing for note-taking, and allowing for repeated viewings if necessary. Anytime, anyplace English instruction may help students better organize their study time, develop their capacity for independent learning, and better retain words, phrases, and sentence structures. "The digital teaching resource platform's prompt feedback motivated me to continually update my writing. I noticed that my composition level rose after some time. A few students, however, said, "The new teaching model is very helpful to me, but because it is done online, the learning initiative is poor, and if the time is a little longer, I can't concentrate, and I hope to simplify the content and practice." "Only one format is used on the SPOC course registration form. To increase interest in SPOC courses, it is advised that other teaching modalities be used instead of the teachers' too simplistic teaching techniques. Second, the flexibility of students' learning styles and instructors' teaching styles must be taken into account while implementing the new English teaching method.According to the feedback provided by the participating teachers, the new teaching approach has improved the impact of English instruction and sparked enthusiasm among teachers by reducing the time required for teachers to repeatedly explain and provide feedback on problems, avoiding a lot of repetitive work, and directing teachers to focus more on teaching design, organising classroom activities, providing individual guidance to students, and providing humanistic care for them[10], [11].

CONCLUSION

Based on SPOC and a review of college English intercultural teaching, this research develops a paradigm for teaching intercultural English in higher education. For this model, a small-scale teaching experiment has been conducted. The contribution of this work via this applied research is as follows. First, there is a certain degree of viability for the SPOC-based

multicultural college English teaching paradigm. Both instructors and students are open to this kind of instruction. This methodology has also significantly increased the efficacy of classroom instruction and students' passion for learning. Results of SPSS analysis and questionnaire surveys show that after-school assignments have gotten generally favourable comments. Therefore, the use of the SPOC-based multicultural college English teaching approach is successful and effective. Second, the cross-cultural communication abilities of students have been successfully encouraged by the college English intercultural teaching approach based on SPOC. The ability of children to study independently has significantly increased, and they have developed their capacity for creative thought and invention. This paradigm successfully addresses the time constraints of conventional language instruction to some degree. Teachers' energy has been significantly conserved thanks to SPOC's difficulties with online assignment creation, task submission, and online assessment. Additionally, students were more eager to learn about English culture. Their proficiency in speaking English has dramatically increased but so has their capacity to cooperate and communicate with English speakers. Therefore, the promotion of college English intercultural teaching is greatly aided by the integration of the future education idea and network creation represented by SPOC.

REFERENCES

[1] N. Z. B. A. Razak and M. A. Babikkoi, “English Language Learning Strategies of Malaysian Secondary School Students: Implication for Inter-Cultural Communication,” *Sociol. Mind*, 2014, doi: 10.4236/sm.2014.42020.

[2] Y. Ran, “Integrating Chinese Culture with Western Culture in EFLT Classroom,” *Stud. English Lang. Teach.*, 2016, doi: 10.22158/selt.v4n3p376.

[3] Z. Xiaoyu, “Research on Culture Introduction and Innovative Personnel Cultivation in College English Teaching,” in *PROCEEDINGS OF THE FOURTH INTERNATIONAL SYMPOSIUM ON EDUCATION MANAGEMENT AND KNOWLEDGE INNOVATION ENGINEERING, VOLS 1 AND 2*, 2011.

[4] L.-F. Lin *et al.*, “News and notes,” *System*, 2014.

[5] S. D. Roueche, “Innovation Abstracts,” *Innov. Abstr.*, 1995.

[6] P. Shaker *et al.*, “Qualitative Research,” *J. Teach. Educ.*, 2009.

[7] E. Stranovská and S. Hvozdíková, *International journal of English and cultural studies.* 2018.

[8] A. N. das Á. ANA, “BOLETIM DE MONITORAMENTO DOS RESERVATÓRIOS DO SISTEMA HIDRÁULICO DO RIO PARAÍBA DO SUL,” *ANA*, 2016.

[9] R. Selvia, M. Coesamin, and H. Bharata, “EFEKTIVITAS MODEL PEMBELAJARAN BERBASIS MASALAH DITINJAU DARI PEMAHAMAN KONSEP MATEMATIS SISWA,” *Nusa*, 2016.

[10] Y. Zhang, “PLACES OF AESTHETICS AND CAPITAL: THE MAKING AND CONSUMING OF ARTS DISTRICTS IN CHINESE CITIES,” *Nusa*, 2016.

[11] S. F. GUARNIERI, “ALTERAÇÃO DE ATRIBUTOS DO SOLO DEVIDO AO EMPREGO DE BIOCARVÃO DE FRUTOS DE Cocos nucifera L.,” *Diss. Mestr.*, 2016.

CHAPTER 5

USING CONTEMPORARY INFORMATION TECHNOLOGY TO PROVIDE DISTANCE LEARNING FOR COLLEGE ENGLISH

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ABSTRACT:
A knowledge-based society with computer information technology, a knowledge economy, and education is steadily emerging in China. With the aid of contemporary information technology, the modern information construction of college English will enable the instruction of college English remotely, promoting the ongoing development of network education in China in the direction of contemporary information. This essay provides an overview of the study's goals and findings on contemporary information technology in college-level English. We consider the value of using contemporary information technology in college English instruction and adopt distant learning. To provide some guidance to pertinent specialists, we proposed significant steps for college English information technology to implement distant teaching. Finally, the sharing of excellent educational materials will be made possible to serve as a resource for advancing the state of rural English teaching.

KEYWORDS:

Contemporary, Economy,Information Technology,Remotely.

INTRODUCTION

Understanding that the modernization and fractionalization of English in colleges and universities is a lengthy and challenging endeavor that calls for a comprehensive understanding of numerous education, teaching, and management issues is necessary. First off, implementing the overall plan for building English infrastructure and promoting the development of English education in China in the direction of internationalization and openness are the main goals of the research on modernized information technology construction of English in colleges and universities. The construction of computer network centers should be sound, and the network structure and functions of the English system should be fully utilised to improve the effectiveness of English professional courses. This brings us to our second point. The benefits of information-based education should be used to develop academic and distant education literature databases and multimedia electronic reading rooms as part of the process of correcting digital audiovisual teaching materials.

In order to reach a larger audience and have more room for growth, online distance education should use computer networks for all aspects of English teaching, student management, and test administration.The implementation of distance education resource management can successfully integrate various teaching resources, better realise the talent training mode and reform mode of English majors, and explore a more advanced teaching resource management mode from the perspective of contemporary distance and open education[1], [2]. English education materials may advance towards the objective of clear resource management by being classified and stored in a scientifically sound manner. Distance learning resources are more comprehensive than those used in conventional English teaching methods, altering the monotonous classroom environment of the past and enhancing classroom instruction with the aid of contemporary information technology. It has overcome the limitations of conventional English instruction and aided students in making full use of online network education

platforms or other media for autonomous study, whether measured in terms of the diversity and quantity of educational materials or technological content. The building of information technology in colleges and universities must be strengthened to facilitate remote learning, enhance the quality of instruction, and implement "online English," "online VOD," "catechism," "micro-class," and other methods. Different teaching strategies, such as "online English," "online VOD," "catechism," and "micro-lesson," may be used to make up for the drawbacks of conventional classroom instruction, expand students' knowledge horizons, and support their quest for new educational materials.

We strive to promote the use of distance learning resources by students and the importance of English instruction in resource management in higher education via the use of information technology.With the advancement of contemporary technology and the growing popularity of the Internet, many schools now employ Internet technology extensively in the classroom. The main research focus of current English teaching changes is the integration of computer Internet and junior high school English instruction. The fusion of these two has improved the classroom environment and greatly facilitated instruction. Teachers should have an innovative and progressive mindset, integrate efficient information technology resources, update the teaching approach as needed, consistently foster students' learning passion and drive, and support rural students as they enhance their English language mastery. When discussing the innovative use of flipped classroom teaching in junior high school English textbooks, Xu Z. and Shi Y. identify some issues with English teaching in rural secondary schools in the context of the Internet. Based on these issues, they explore the flipped classroom teaching model using "Internet +" means[3], [4].

We find that by utilising the flipped classroom teaching model to change the conventional teaching process, this new approach can significantly boost students' motivation to engage in English learning, which has a positive impact on the effectiveness of English teaching and their capacity to master the language. According to Shyamlee S. D., instructors may effectively use the Internet to enhance the quality and effectiveness of their junior high school English lessons. To encourage student motivation in the learning process and to establish the groundwork for students to develop autonomous learning habits, the classroom uses microlessons, online question-and-answer sessions, and online question banks. Students may learn over the Internet, which can increase their effectiveness during prestudy and review. It is also crucial to increase students' willingness to learn. According to Du Y., new educational paradigms including the micro-class, catechism, and flipped classroom have developed in the information technology age and are highly regarded by professionals and academics as well as students. This new educational model may provide students the freedom to study on their own at any time and anywhere, which can enhance knowledge comprehension and application.

It is also the primary trend in China's educational growth.The implementation of education, as well as the creation and use of information technology in distant learning, provide a wider area for the advancement of contemporary education for the teaching of English in colleges and universities. On the one hand, implementing distance learning through the use of contemporary information technology can significantly contribute to making English distance learning in colleges and universities more Chinese and distinctive, as well as making teaching materials more accessible and varied. This can lay a strong technical foundation for the growth of distance learning in China. On the other hand, it may successfully provide a theoretical scientific foundation for the development and use of distant learning and perform well as a typical demonstration, which plays a significant guiding function in development planning and practical application.We will go into great depth on the design and implementation of the smart campus in this part.Remote Implementation The evolution of a smart campus is dependent on the growth of the digital campus. College English is a new

paradigm for the advancement of college education informatization since it can provide a variety of services more rapidly, flexibly, and affordably than the conventional digital campus.Wired, wireless, and mobile network settings make up the infrastructure used to build the English network in colleges and universities. On this foundation, the Internet of Things system is developed to create a sensing network environment, integrating the current network infrastructure via intelligent promotion. The current data center, one-card system, IDC room, and storage environment are merged with virtualization technology to develop a cloud service platform to support the college English network in order to support the huge data storage and high-speed computing environment of college English.A number of factors need to be taken into account while establishing intelligence, such as creating a physical resource base and a basic platform employing actual servers, storage units, and network devices. The physical integration of devices is made possible with the aid of virtualization technologies. After then, the physical scope of computer resources will no longer be an issue.First and foremost, an all-encompassing and practical network environment is required for English teaching in colleges and universities in order to build an IoT system that supports various smart terminals, facilities, and devices. Next, big data must be established globally, including a storage environment and computing environment, to establish data and computing support for smart campuses[5], [6].

DISCUSSION

The building of a smart campus can be divided into the building of four subplatforms : first, the building of basic network infrastructure, the building of high-speed Internet, and the connecting of wired and wireless networks; second, the building of an Internet of Things system that includes all equipment, facilities, and intelligent terminals of various facilities based on ubiquitous network; third, the building of cloud computing infrastructure; a Infrastructure development for campus networks is mostly complete. The development of an IoT system and cloud stack is crucial to the current state of English construction in colleges and institutions. The remainder of this essay largely analyses the aforementioned two factors.When designing a cloud data centre, network architecture is a crucial component that must be taken into account. It can provide enough security for a cloud data centre with great scalability and resource efficiency. To provide an open, secure, simple-to-maintain, and elastic cloud service, the network architecture of a cloud data centre has to be virtualized, incorporating both newly acquired equipment and old equipment. It will become a scalable, convergent computing architecture in the data center. Due to its excellent scalability and efficiency, Ethernet is the network technology used by significant data centers. The services and Storage Area Networks are linked to the campus network, which is secured by a firewall as illustrated. A specialised, fast network called SAN offers network access to storage. Hosts, switches, storage components, and storage devices make up SANs, which are linked via a variety of technologies, topologies, and protocols.A crucial component of cloud computing, cloud storage handles crucial activities including storage, operations, and disaster recovery . The data centre includes four sets of HDS storage devices, Net-APP, Infortrend, and two more new devices that will be added to a pool of storage resources. Following this procedure, it may provide the following services, including data transmission capacity, resource supply, and capacity for allocation of resources. Two recently acquired storage devices and one pre-existing web application storage device make up the primary storage area, which will be installed in the network center's IDC room. Additionally, the other two storage systems in the computer lab at the library will be taken into consideration for remote disaster recovery. Real-time synchronisation is accomplished with a fibre optic link between the mainframe and the backup storage. Multiple heterogeneous storage device pools are merged into one storage resource pool utilising flat network architecture, centralised optical switching framework, and WDM fibre virtualization technology to offer transparent services for diverse applications.

Performance Evaluation:

This section will discuss how the campus is organized, how classroom instruction is managed, how student positioning data is processed, and how the efficacy of the suggested strategy is evaluated.The situation in an Online Classroom for InstructionThis report researched online classroom teaching to examine the present state of the practice. The start time and quantity of online courses at each institution as determined by a study on the usage of online courses at five Chinese universities.Since late 2016, schools and universities have been able to provide online teaching courses. The second half of 2017 has seen an accelerated surge, indicating a major increase in demand for online courses. It proves that there is a substantial demand for online education courses. The quantity of online teaching courses at the five institutions has steadily stabilized by June 2018. This is the outcome of 4G restrictions. With the combination of 5G network technology and online teaching platforms, the number of online teaching courses may likely rise even more. Here, integrating 5G network technologies with online learning environments will significantly advance education.The gathering of both interior and outside positioning data constitutes the two main components of the student positioning scenario information. RFID-based indoor positioning technology is used to collect location data inside, while mobile terminals' GPS positioning sensors are used to gather data outside. Among them, the goal of gathering indoor location data is to prohibit certain students from logging into the system outside of class as well as to identify the precise position of students who log in during class. To send reminders to students who don't check in during class, outside location data is gathered.A simple setup was needed in the classroom to get location data. In each of the four corners of the classroom, four readers are assigned, and 16 reference tags are dispersed equally in a square area surrounding the readers. Additionally, RFID tags were previously provided to all of the class's participants [7], [8].The student user is considered to be outside the instructional building, that is, outside the classroom, if the GPS signal captured by the mobile terminal's GPS sensor is strong and the received signal strength indication value of the RFID tag on any two readers is particularly weak or has no RSSI value. The student user is assumed to be within the reader if the RSSI value of the RFID tag on any three readers is high and the GPS signal is faint. The student is determined to be on the floor of the teaching building if the GPS signal and the RSSI value on each reader are both weak. This means that they are within the teaching building but outside the classroom.The VIRE algorithm presents the ideas of virtual reference markers and neighborhood mapping while drawing on the LANDMARK method's fundamentals.

The main goal of VIRE is to improve tracking item locations by removing improbable positions and providing no more reference tags. LANDMARC is a location-sensing system that uses RFID technology to find items. The investigation demonstrates that the quantity of reference tags has a significant impact on the landmark algorithm's location accuracy. The positioning accuracy will suffer if there are too many reference tags added, since this will raise the cost of the tags in the short term as well as their density and cause significant signal interference. Based on this, the idea of virtual reference tags is offered, using the Killly: interpolation technique to estimate the signal strength values of virtual reference tags and utilise them as real reference tags for further computation and localization. depicts the VIRE localization algorithm's localization model.In the placement model of the VIRE algorithm, reference labels are placed uniformly across the space, and four readers are positioned in each of the four corners. The basic principle of the VIRE algorithm is to insert four virtual reference labels between each set of four real reference labels, using each actual reference label as a unit grid that is further divided into NxN tiny grids. The labels are consistent and evenly spaced apart. Since the coordinates of the real reference labels are known, it is simple to compute the coordinates of the virtual reference labels, which is equal to increasing the number of references in LANDMARC's tagging method. Using the RSSI values of the real

reference tags and linear interpolation, we can get the RSSI values of the grid's virtual reference tags. The virtual reference marker's layout.The LANDMARC algorithm and the VIRE algorithm are identical. Based on the discrepancy between the field strength values of the reference tag and the tag to be found, the closest neighbour reference tag is chosen. The VIRE method differs in that it inserts a threshold value, designating as 1 and zero respectively, those sites where the difference between the field strength values of the reference tag and the tag to be identified is less than the threshold value. As a result, the areas highlighted with a 1 make up a hazy map. The closest neighbor reference tag, or the reference tag represented by the position of 1 in each fuzzy map, is produced by intersection of these fuzzy maps since each reader has its own fuzzy map. The original VIRE technique locates the intersection to get the last closest neighbor reference tag using thresholds and fuzzy mappings. The precise concept is to record the location as 1 rather than 0 when the difference between the reference label's field strength value and the label to be found is less than the threshold value. The intersection of k fuzzy mappings is performed to provide the best nearest neighbor reference label using k readers corresponding to k fuzzy mappings. The threshold value that is chosen in this method is of greater significance. Some reliable nearest neighbor reference labelling results will be lost if the threshold value is too low and there aren't enough spots tagged as 1 at the intersection of k fuzzy mappings. The redundant location information cannot be properly deleted if the threshold value is too high and there are an excessive number of places tagged as 1, leading to erroneous final localization results. The idea of threshold interval is put out in order to avoid the aforementioned circumstance.First, a bigger interval is chosen for the first threshold interval. The number of places tagged as 1 is then verified during runtime from the intersection of the fuzzy mappings. Then, using, the threshold interval is dynamically modified to regulate the number of locations between the range of 4, 5, and 6. Then, to determine the position coordinates of the tags that need to be found, the integers in the threshold interval are used as the thresholds of the enhanced method, respectively. The final position coordinates are determined by calculating the average value of the tags that need to be positioned below these criteria. The built-in GPS sensor of the Android operating system may be used to get location scene information and outside information. The phone may be located using Android's built-in class location manager. RFID is utilised to pinpoint the precise position of pupils for indoor location scene information. The upgraded VIRE algorithm is the particular technique. The comparison of the VIRE algorithm with the VIRE algorithm and LANDMARC method for positioning inaccuracy shows that the revised method estimates the average localization error of the tags to be located to be the minimum. The LANDMARC algorithm average positioning error for the 10 tags was 0.6732 m, the VIRE algorithm average positioning error was 0.3517 m, and the improved VIRE algorithm average positioning error was 0.1738 m. These values are 0.5058% and 0.7418% lower than the previous two algorithms, respectively.The examination shows that the modified VIRE method has the best result and the minimum localization error when compared to the original VIRE algorithm, the original VIRE algorithm, and the LANDMARC algorithm. The modified VIRE method outperforms the conventional VIRE algorithm in terms of accuracy, but it takes longer to determine the threshold value. The VIRE method is hence appropriate for issues requiring rapid running and good localization accuracy. As a result, it is more suited for finding workers or students in certain roles in workplaces[9], [10].

CONCLUSION

With the aid of contemporary information technology, the modernized information construction of English in colleges and universities aims to enable the teaching of English remotely in these settings. This will support the ongoing development of China's online education in the direction of contemporary information technology. The purpose of this paper is to provide specific reference and reference to relevant practice by outlining the research

objectives and contents of the modernized information technology construction of English in colleges and universities, analyzing the significance of implementing modernized information technology of English in colleges and universities to realise distance learning, and proposing significant measures to realise distance learning of English in colleges and universities. The research intends to facilitate the exchange of top-notch educational materials and serve as a guide for enhancing English instruction in rural regions.

REFERENCES

[1] B. T. Brown, "Towards 100 years of LIS education and research at UCD," *Aslib Proc. New Inf. Perspect.*, 2009, doi: 10.1108/00012530910959826.

[2] J. A. Gamble and S. B. Milne, "Using LEXT laser-scanning confocal microscopy to identify enamel surface defects in archaeological caribou dentition: A pilot study from Southern Baffin Island, Nunavut, Canada," *J. Archaeol. Sci. Reports*, 2018, doi: 10.1016/j.jasrep.2017.12.033.

[3] M. R. D. Tielmann and T. J. Hill, "Air Void Analyses on Asphalt Specimens Using Plane Section Preparation and Image Analysis," *J. Mater. Civ. Eng.*, 2018, doi: 10.1061/(asce)mt.1943-5533.0002422.

[4] N. Colaninno, J. Cerda, and J. Roca, "Spatial patterns of land use: morphology and demography, in a dynamic evaluation of urban sprawl phenomena along the Spanish Mediterranean coast," *ERSA Conf. Pap.*, 2011.

[5] C. Callahan, P. L. Sadowsky, and A. Ferreira, "Diagnostic value of plaster models in contemporary orthodontics," *Semin. Orthod.*, 2005, doi: 10.1053/j.sodo.2005.04.001.

[6] K. De Maere and S. De Haes, "How do CIO's become skilled leaders? An examination of their social media profiles," in *Proceedings of the 5th European Conference on Social Media, ECSM 2018*, 2018.

[7] L. A. Newman, "Abstract PL03-03: High-risk/triple-negative breast cancer and African ancestry," *Cancer Epidemiol. Biomarkers Prev.*, 2011, doi: 10.1158/1055-9965.disp-11-pl03-03.

[8] M. Nunes, "Failure Notice," *M/C J.*, 2007, doi: 10.5204/mcj.2702.

[9] S. Pajka-West, "Representations of Deafness and Deaf People in Young Adult Fiction," *M/C J.*, 2010, doi: 10.5204/mcj.261.

[10] D. McCloskey, "Other Things Equal - Economical Writing: An Executive Summary," *East. Econ. J.*, 1999.

CHAPTER 6

IMPACT OF MENTAL HEALTH INTERVENTIONS BEFORETHE ENGLISH LANGUAGE

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ABSTRACT:
College students' physical and mental health growth needs to be observed and researched. This paper examines the effects of pre-test mental health interventions on college students' English test scores based on statistical analysis of the questionnaire, summarizes the issues and features of college students' mental health, and investigates the causes of psychological issues. This study holds the view that these causes are mostly connected to students' personal reasons, pressure from the school and social environment, and issues associated to a lack of family support, based on research findings and related survey data about the mental health state of college students by researchers. The data analysis demonstrates that the amount of mental health intervention students engages in outside of class has a stable and low negative correlation with the scores of each factor and is negatively correlated with the scores of each subscale in the relationship between English education and mental health in colleges and universities. The findings of the experiment demonstrate that there are very large disparities in academic achievement and that there is a linear link between students' mental health and their experience of English exercise. College students' mental health is successfully developed when their exhaustion score is low and their mental health level is high.

KEYWORDS:

Correlation, Investigates, Psychological, Questionnaire.

INTRODUCTION

The development of diverse positions' professional expertise is accelerating as the trend of economic globalization grows more pronounced. Many workers' initial knowledge and abilities are no longer enough for the job. College education offers short-term training and further studies to boost self-competitiveness. As a result, there is a large market need for talented individuals who have received a college education. Theoretically speaking, despite the fact that people are increasingly paying attention to college students' mental health, there is still much room for improvement. They both share the psychological issues that modern college students face, but other psychological phenomena have also become more noticeable as a result of the nature of higher education. Because of this, study on the mental health state of college students is especially relevant. However, the majority of current research on this topic is largely theoretical in nature and very rarely is it supported by survey data [1], [2].The outlook for college graduates' mental health, however, is not promising. We should focus on cultivating and developing college students' whole quality, particularly the healthy growth of their psychological quality, while building and increasing the quality of instruction. Therefore, it is important to monitor and research how college students' physical and mental health are developing. Practically speaking, college students' time at university marks a significant turning point in their lives. Desensitization approaches may help test takers withstand these impulses since many of the issues that cause exam anxiety are hypothetical. People will unavoidably experience a variety of stresses and discomforts throughout this time.

Therefore, studies on college students' mental health may assist educators in understanding the psychological dynamics of students and in developing more rational and scientific related policies to support college students' mental health.In order to comprehend the present psychological state of college students, perform statistical analysis of the survey findings, and summarise the current issues and features of college students' mental health, this study conducts a questionnaire survey, supplemented by case interviews, etc. Boys and girls generally exhibit the same development characteristics, which is also consistent with the development characteristics of the student body as a whole, according to the analysis of the development characteristics of English test anxiety among middle school students of different genders. However, whereas college ladies score much higher than boys in terms of self-esteem, capacity for independent learning, and independence, the analysis of variance and subsequent LSD multiple comparison findings demonstrate that there is no significant difference between the grades of college girls. In terms of external factors, family education, school education, and social environment are also significant causes of students' English test anxiety, with percentages of 39.5%, 33.4%, and 26.5%, respectively. Other factors also have a certain influence on students' English test anxiety and cannot be ignored. The majority of students choose this item as their primary reason for test anxiety. This is a chronic neurotic anxiety illness, which implies that the test-taker's mental health has been impacted. It demonstrates that the test-takers dread and concern about the exam have developed into a vicious conditioned reflex, and an unexplainable fear of the test's arrival has arisen. In order to give both theoretical and empirical support for the study on college students' mental health, this article begins with a questionnaire survey, moves through the actual survey, and then speaks with statistics. The appropriate intervention strategies are then proposed to assist college students with their mental health, in order to provide helpful direction and aid in improving their mental health[3], [4].As society advances, both the state and the general public are paying increasing attention to higher education and the mental health of college students. Through the use of more survey tools, such as the Self-Esteem Scale, Psychological Symptom Self-Assessment Scale, and Mental Health Survey Scale, many educators have set up a research project on the mental health development of college students. They believe that the majority of college students in the area have healthy psychological development, and the overall psychological state is positive, but there are some exceptions.

The findings of Fancourt and Tymoszuk’s study demonstrate that failure feedback will have a significant impact on the achievement in reality of people with low self-evaluation, and they will undervalue their future accomplishments. In contrast, subjects with high self-evaluation are less vulnerable to failure feedback, and they will overvalue their future accomplishments. While those with low self-esteem do the contrary, those with strong self-esteem credit their success to their own skills and external contextual circumstances are to blame for their failure. They believe that luck and chance had a role in their achievement. When examining the reasons offered by respondents of various genders for the accomplishment or failure of a task, Nahmias et al. found that male subjects consistently attribute their success to internal variables like talent and aptitude. The reasons given by the female respondents varied significantly depending on the nature of the assignment, and when they were successful, they did not exhibit a clear inclination to be their own feature. Numerous research has shown that rational emotional therapy and rational system reconstruction are effective ways to reduce exam anxiety for English, but they have no appreciable impact on enhancing academic achievement. Maramba et al.'s proposal for cognitive-attention training is meant to help people concentrate on task-related stimuli, which will free up their attention from worrying about the English language exam.In comparison research on the connection between psychology and mental health among international college students of various ethnic backgrounds, Nyashanu et al. found that diverse ethnic groups and cultures, who ascribe luck to occurrences, had worse mental health levels. Techniques like rational system restructuring and rational emotion therapy are often used in cognitive therapy.

According to Fritz et al.'s research, students who attributed their academic performance to stable variables like their own aptitude and persistence had lower levels of anxiety than those who attributed it to unstable elements like chance. The distribution of test anxiety for English is significantly different between boys and girls. Boys are more likely than girls to have low English test anxiety levels, whereas girls are more likely to have high English test anxiety levels. The percentage is higher than the percentage for boys. The percentages of male and female students who describe themselves as having a medium degree of anxiety are 66.5% and 67.8%, respectively. When compared to students with low stability factors, such as inadequate effort and poor luck, students with strong stability factors reported greater levels of worry [5], [6].

DISCUSSION

The fundamental definition of avoidance is the refusal of pupils to communicate and their avoidance of instructors in attitudes and behaviors. When students and instructors behave inconsistently and emotionally out of sync, there is conflict. Intimacy is the closeness and harmony between the students and the teacher in the classroom. Students' appreciation of instructors and their attentiveness to their attitudes and behaviors are referred to as attachment.Anxiety over the English language exam significantly correlates negatively with all of the MHS's subscales for middle school pupils. illustrates how worry over the English language exam impacts students' mental health on five different levels. The findings indicate that there is a substantial negative link between the English test anxiety content scales and the 21 content scales in the MHS, specifically between English test anxiety and cognitive normalcy. There were substantial negative relationships between English exam anxiety and all content scores, with the exception of wellbeing. A very substantial negative association exists. Only the two content scales of activity and extraversion in the personality integrity subscale are significantly negatively correlated with English test anxiety, whereas conscientiousness andindependence are significantly positively correlated. The well-adjusted content measures and test anxiety for the English language had very strong negative relationships. An item with a score over 0.4 is seen to have excellent discrimination, one with a score below 0.4 but above 0.3 is thought to have good discrimination, and one with a score below 0.3 is thought to have poor discrimination, according to the basic principles of psychometrics.The findings revealed that all SCL-90 factor scores had a consistent and low-degree negative connection with students' preference for English lessons, while all subscale scores had a steady and low-degree positive correlation. According to a correlation association, students' mental health is better when they like their English lessons more. This finding adds further evidence to the idea that physical activity improves mental health.

An analysis of factors related to psychology:

The investigation into psychologically related factors uses a random sampling methodology, choosing five key classes and regular classes as the study's units of inquiry while working under the direction of a psychology teacher and utilising class time for self-study in order to provide consistent direction. The whole exam, which included language and questionnaire testing of the kids, lasted 45 minutes. 315 questionnaires were actually delivered; 295 of those were recovered, yielding a recovery rate of 93.7%; 293 of those were valid, yielding an effective rate of 93%. Students' scores on the teaching methods, teaching contents, teaching effects, and teachers' abilities of English courses are 7.34, 7.33, 7.05, and 80.70, respectively, according to the evaluation of the teaching situation of English courses in colleges and universities for the English test.Twelve classes of students were chosen from four middle schools in the city as part of the test's stratified sampling procedure in order to ensure the sample's representativeness.Variance analysis on the mental health of middle school pupils with various degrees of English exam anxiety. The findings reveal that there are very large variations in the mental health ratings.

The pupils' mental health scores are, in succession, 251,97, 232,74, and 194.05. This is due to the rise in English exam anxiety. The applicant may eventually effectively adapt to each stimulus with this kind of repeated training, and they become less sensitive to any stimulus that makes them feel anxious. Eventually, desensitization is complete when even the strongest stimulus can no longer make the responder feel anxious.There are clear gender differences in the mental health level of English test students, with boys' mental health levels being higher than girls', and psychological issues among rural students being greater than those among urban students. English majors have significantly higher levels of mental health than non-majors, with English majors having significantly lower levels of mental health than non-majors. However, this level of anxiety won't interfere with the students' usual eating, sleeping, or studying habits leading up to the test, and it will gradually subside after the test is over. Exam anxiety like this is often futile.

Evaluation of the Impacts on Mental Health:

300 questionnaires in all were distributed, and 277 valid questionnairesrecovering at a rate of 92.3%were retrieved. 20 faulty questionnaires were eliminated, leaving 257 valid ones with an efficiency percentage of 85.7%. Ten components make up the scale and are rated in both positive and negative ways. Typically, a score falls between 10 and 40. The scale's Cronbach coefficient in this research was 0.7952 and indicated that it had excellent validity. Additional testing revealed that English majors substantially differed from students in liberal arts programmed on the aforementioned aspects, with the exception of feeling of aim and direction. In terms of the above dimensions of mental health, English majors perform better than liberal arts and science students; in terms of self-acceptance and identity, science students perform better than liberal arts students. There is a significant difference between science students and liberal arts students in the dimensions.There are substantial disparities in the academic performance of students with varied English exam anxiety levels, according to the variance analysis findings on the academic performance of middle school students.

The average of the nine SCL-90 components for college students is greater than the indicators in the full sample of college students when compared to that sample. The relatively pure university cultures of English-speaking colleges and universities, when compared to the majority of colleges and universities in the nation, increase students' closed limitations and developmental lag, leading to extreme cognitive biases and barriers to the emergence of self-awareness in college students. The vocally described content technology's analysis of positive and negative events yields Cronbach's alpha values of 0.8 and 0.89, respectively. The three aspects of self, wholeness, and persistence were duplicated using the example of the attribution analysis of negative event subscales. The corresponding coefficients are 0.93, 0.48, and 0.63[7].

Eight content measures and one validity scale-make up the mental health test scale for college students. The Cronbach coefficients for each subcontent scale in this survey ranged from 0.689 to 0.784, suggesting strong construct validity. The Cronbach coefficient for the validity scale was 0.921. There was no statistically significant difference in the scores of literatures, science, and physical education among the SCL-90 factors, with the exception of terrorist factors, in terms of autonomy, successful experience and sense of control, empathy, and cooperation, as well as in the dimensions of goal and sense of direction.As can be observed, there is a very substantial inverse relationship between anxiety over the English language exam and academic achievement and mental health and a considerable inverse relationship between mental health and academic achievement. This demonstrates that, generally speaking, students' academic performance and mental health are both negatively impacted by their degree of English exam anxiety, whereas the opposite is true for students with superior mental health. In order to provide a foundation for the growth of school instruction and mental health work in middle schools, the features of the development of grades rise and the

reasons of test anxiety are also explored.According to the statistical findings the intellectual and psychological performance of college students is zero. The fact that there is a significant association at the 0.5 level further supports the notion that psychology affects students' academic success. Students who do well academically tend to be more optimistic, while those who perform less academically tend to be more "pessimistic." various college students in various classes have somewhat differing mental health conditions, although these variances are not very noticeable. Juniors in particular exhibit greater levels of psychological distress than freshmen. The lowest levels of anxiousness were seen among sophomores. First-year students and juniors experience psychological distress in various ways. Freshmen are transitioning from middle school to university learning modes as they begin their first year of classes. They have also been brought about by changes in the campus environment and social surroundings. There are three key middle schools and three regular middle schools among them, with each having six classes and three classes in each grade, for a total of 18 courses. Following the withdrawal of the questionnaire, 32 invalid questionnaires were eliminated, yielding 727 valid surveys. See the page for information on the subjects' distributional features.

Relationship Analysis for Mental Health:

Data from the mental health evaluation were entered into the computer and processed using SPSS for Windows 10.0 statistical software. Based on Zinc's Perceived Social Support Scale, a revised version of the scale was employed in this research. The original scale's "colleagues and leaders were changed to "classmates and teachers" to account for the test respondents' age. There are 12 self-assessment items on the scale; "family support" is scored by answering questions friends' support" is scored by answering questions 6, 7, 9, and 12; and "others' support is scored by answering questions 1, 2, 5, and 10. The overall score for social support is the sum of all the individual question scores. If the student receives a social support score of fewer than 50 points overall, there is a social support issue; if the student receives a social support score of less than 32 points, there are major social resource and social support system deficiencies.Positive high arousal, positive low arousal, negative high arousal, and negative low arousal are the four dimensions. Positive high arousal consists of eight components, such as pride, joy, and hope; positive low arousal consists of six components, such as calmness and relaxation; negative high arousal consists of eight components, such as impatience, concern, hatred, and shame; negative low arousal consists of twelve components, such as boredom[8], [9].

The scale has a good degree of criterion validity; the correlation coefficients with the SCL-90, the mental component of the CMI, and the 16PF psychological variables are all 0.72. For the sake of research convenience, these measures were not used in this study; nonetheless, based on the aforementioned scales and interviews with instructors and students, the study initially classified test anxiety symptoms into psychological symptoms and physical symptoms. The scale has strong construct validity, which shows that the structural model fits the data well. The scale contains a standardized norm for the mental health level of middle school pupils and categorizes their mental health into five categories, ranging from extremely bad to outstanding, from low to high.In terms of the average SCL score and the scores for the other eight SCL factors, with the exception of the somatization factor, urban students scored lower than rural students, indicating that rural students are more likely to experience psychological issues than urban students. Urban students may adjust to university life more rapidly and have more self-confidence, which might be the cause. Girls' general mental health is a little worse than boys', and there are noticeable variations between boys and girls, particularly in terms of "communication confusion tendency" and "depression tendency." The "impulsive tendency," "horror tendency," and "sexual tendency" differences between boys and girls are somewhat greater, although they are not very noticeable.

In the same semester, several topics were tested two and a half months apart, one week before the midterm and one week before the final. The scale's test-retest reliability was 0.849. A reliability coefficient of 0.70 or above is acceptable by psychometric standards. This scale has strong test-retest repeatability, as can be observed.

The Level of Emotional Regulation:

The emotional control of the teacher-student connection is the experiment's independent variable; the dependent variables are academic emotion and student accomplishment; and the unrelated factors are mostly under the control of the balancing method and the constant technique. The same instructor teaches both classes, and both classes get the same instruction in terms of subject matter, instructional time, instructional pace, instructional venue, and instructional environment. The intervention's content is based on communication analysis theory and positive psychology. Lectures and communication counselling are the teachers' primary intervention strategies; group and individual counselling for mental health are the students' primary strategies. The control class received instruction in accordance with the original lesson plan, whereas only the experimental class received intervention. A graduate student in psychology served as the primary tester for each course. The MHS test administration guidelines are available, as are the guidelines for delivering the English test anxiety. The exam took around 45 minutes to complete, and the questionnaires were collected immediately thereafter.

According to the results, there was no difference between the experimental class and the control class prior to the experiment in any of the four dimensions of academic mood. Positive academic emotion scores were higher than pretest values after the experiment, whereas negative academic emotion levels were lower than pretest scores for the students in the experimental class. The academic mood ratings on the pretest and posttest in the control class, however, did not significantly alter.However, it does not reflect the precise relationship between the three, such as how different test anxiety levels affect middle school students' academic performance and mental health, how test anxiety affects mental health, how different mental health levels relate to academic performance, etc. predisposition for communication misunderstanding. Students in college crave for friendship and anticipate that interpersonal interactions will lead to understanding and emotional support. They struggle to build strong connections with others since they also lack interpersonal skills and know-how to handle interpersonal problems. College students are more likely to have poor self-esteem, self-isolation, and a strong sensation of loneliness because of this stark contrast between high expectations and low performance. Possessing obsessive-compulsive traits.

Compulsive behaviors and thoughts are the primary symptoms. Some students have a good understanding of why a certain thought is incorrect, but they can't stop thinking about it often. Other students have a strong understanding of why a particular action has been performed, but they still can't resist doing it constantly.The data collected from the survey in this research were processed using SPSS 11.5 software, inputted, and aggregated for analysis. test: used to compare different family backgrounds, whether or not an only child, and other factors that have an impact on the psychological status of college students; analysis of variance: used to analyses and compare the factors that affect college students' psychological status descriptive statistical analysis: primarily used to summaries the overall situation. Then it is separated into various dimensions, generally before the exam, during the test, and after the test, and the questions are put together depending on how well the students do in these two parts.In the comparison of each factor score of the SCL-90 and the average score of the SCL, the scores of numerous subscales of the scale and the overall score were greater than those of girls with the exception of the three factors of hostility, paranoia, and psychosis. Men and women differed in the other six criteria and the average SCL score in addition to the fact that there was no difference between the sexes in the first component.

Menstrual cycles for women can have a variable impact on mental health. However, even when there is a lot of stress, the person may not always be aware of the symptoms, thus it is common that there are no differences in hostility, paranoia, and psychosis between men and women. A substantial positive correlation between attachment and closeness in the teacher-student relationship and positive high arousal and positive low arousal academic emotions as well as a significant negative correlation with negative low arousal academic emotions. Conflict and avoidance had a positive and negative correlation with negative high and low arousal academic emotions, respectively, and a positive and negative correlation with positive high and low arousal academic emotions. youngsters who are the lone kid have much higher mental health than other youngsters. The lone kid serves as the family's centre of gravity and is entitled to more monetary and spiritual assistance than other children. Students who have unrealistic expectations may experience exam anxiety as a result of their stress and aggravation before and after the test. Conversely, students who have unrealistic expectations may lack the required drive and excitement for studying[10].

CONCLUSION

The findings of this research demonstrate a substantial favorable relationship between college students' overall academic achievement and mental health. Other aspects of mental health that are associated to academic success include perceived awareness, moderate enthusiasm, wellbeing, extroversion, spiritual coherence, and interpersonal connections. The results of the correlation between academic performance and various content scales show that there is a positive correlation between academic performance and 21 content scales of mental health, with the exception of perceptual awareness. There is a significant positive correlation between academic performance and various subscales of mental health. By examining the various components of the mental health scale, it is clear that, in addition to the previously mentioned components that are not significantly related to academic performance, the primary intellectual components of the cognitive dimension of mental health, such as understanding, judgement, and reasoning, have a direct bearing on academic performance. Since the dimensions of emotion, personality, and social adaptation fall under the category of nonintellectual factors, which indirectly affect academic performance through the regulation of intellectual activities, this is especially advantageous for clients with social skill impairments as they can learn to adopt more beneficial behaviors by receiving feedback from children and group leaders about the effects of their interpersonal behaviors. Additionally, it will have a detrimental effect on how well they develop their own emotions, will, personalities, and social skills.

REFERENCES

[1] E. R. Pedersen *et al.*, “Elusive search for effective provider interventions: A systematic review of provider interventions to increase adherence to evidence-based treatment for depression,” *Implementation Science*. 2018. doi: 10.1186/s13012-018-0788-8.

[2] P. P. Casey, A. M. Feyer, and I. D. Cameron, “Associations with legal representation in a compensation setting 12 months after injury,” *Injury*, , doi: 10.1016/j.injury..01.003.

[3] A. Venning, J. Eliott, A. Wilson, and L. Kettler, “Understanding young peoples’ experience of chronic illness: A systematic review,” *Int. J. Evid. Based. Healthc.*, 2008, doi: 10.1111/j.1744-1609.2008.00107.x.

[4] J. Bonapace, G. P. Gagné, N. Chaillet, R. Gagnon, E. Hébert, and S. Buckley, “No. 355-Physiologic Basis of Pain in Labour and Delivery: An Evidence-Based Approach to its Management,” *J. Obstet. Gynaecol. Canada*, 2018, doi: 10.1016/j.jogc.2017.08.003.

[5] N. Fernandez, G. Grataloup, and K. Posner, "QL2 TRANSLATION OF THE COLUMBIA SUICIDE SEVERITY RATING SCALE (C-SSRS) FOR USE IN 33 COUNTRIES," *Value Heal.*, 2008, doi: 10.1016/s1098-3015(10)66182-7.

[6] Nct, "Treating Comorbid Depression During Care Transitions Using Relational Agents," *https://clinicaltrials.gov/show/NCT02845102*. 2016.

[7] A. Macintyre, D. Ferris, B. Gonçalves, and N. Quinn, "What has economics got to do with it? The impact of socioeconomic factors on mental health and the case for collective action," *Palgrave Communications*. 2018. doi: 10.1057/s41599-018-0063-2.

[8] D. C. Mohr, M. N. Burns, S. M. Schueller, G. Clarke, and M. Klinkman, "Behavioral Intervention Technologies: Evidence review and recommendations for future research in mental health," *Gen. Hosp. Psychiatry*, 2013, doi: 10.1016/j.genhosppsych.2013.03.008.

[9] A. Fenwick-Smith, E. E. Dahlberg, and S. C. Thompson, "Systematic review of resilience-enhancing, universal, primary school-based mental health promotion programs," *BMC Psychol.*, 2018, doi: 10.1186/s40359-018-0242-3.

[10] S. Gupta and R. Sagar, "National mental health programme-optimism and caution: A narrative review," *Indian Journal of Psychological Medicine*. 2018. doi: 10.4103/IJPSYM.IJPSYM_191_18.

CHAPTER 7

IMPORTANCE OF EDUCATIONAL GAMES: THE STUDY OF ENGLISH

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ABSTRACT:
The use of educational games is now a trendy issue, but there hasn't been much research on how they might be used to teach college students English. This research used a quick evidence assessment review methodology to examine how educational games are incorporated into the collegiate English teaching and learning process. We did a review to find and synthesize the literature since the literature review is a crucial step in qualitative sampling methodologies. It examined peer-reviewed journal papers from both domestic and foreign publications. We discovered that playing educational games helped students improve their collegiate English skills and attitude towards studying. In the meanwhile, educational games' enjoyable experiences may lighten the cognitive strain of studying English in college. This study offered some evidence in favor of expanding the use of educational games in the teaching and learning of college English.

KEYWORDS:

Assessment, Academic Abilities, Accessible, Methodologies.

INTRODUCTION

Computer games are a new genre of widely-played entertainment that have emerged as a result of the computer science and network technology's fast growth in the twenty-first century. Computer games have created a new sector and have grown quickly in recent years. Numerous gaming software have been created and are readily accessible on the market as a result of the growth of the digital game business. Video games were exploited for educational reasons, and there was a mad rush to include instructional information into games "in an ad hoc manner.In order to calm pupils and enable them to get the necessary information and academic abilities, educators have investigated ways to blend academic instruction with games. As a result, removing pupils from conventional computer games allows for computer games to favorably influence and play a part in their development. There may be a place for video games in the teaching and learning process. At the same time, learning components may include the captivating magic components seen in video games. It is an issue that merits thought in the context of the present educational policy which promotes the shift from exam-focused to quality education.In order to enhance students' attitudes and their learning effectiveness, the research primarily focuses on the integration of educational games into the college English teaching and learning process. The link between educational games and collegiate English instruction is primarily investigated from three dimensions: English competency, learner attitude, and cognitive burdens. The research investigates the connections between educational games and learners' attitudes towards studying college English as well as the associations between the enjoyable experiences produced by educational games and cognitive burdens[1], [2].

Serious games, digital-learning games, educational video games, and digital educational games are all terms for educational games, which use instructional information as its central design element and goal to improve learning. Educational games are a kind of digital media that mix information into fun activities and are growing in popularity. Computer games have received more recent recognition as the best educational tool.

The integration of educational games into the collegiate English teaching and learning process is the subject of a rather modest body of research that focuses on improving students' attitudes and their learning effectiveness, such as English competence, learners' attitudes, and cognitive burdens.College English learning proficiency is a thorough assessment and feedback of students' English skills. There are several ways to describe college English competency. However, there are five proficiency bands, namely very high proficiency, high proficiency, moderate proficiency, low proficiency, and very low proficiency, according to the EF EPI-s, a study of the acquisition of English skills by secondary and tertiary students. Chinese students speak English with a modest level of competence. According to the author's understanding, almost all college students had studied English since they were at least nine years old, in grades spanning from elementary school through high school. CET-4's total national pass percentage is over 40%, while the second exam's success rate is approximately 60%. What are the humiliating outcomes of the college English test-4 pass rate? The effect of educational games on college English competency is shown in existing research. Educational games might facilitate individualized English learning, particularly in CET-4 vocabulary mastering. Educational games have the potential to provide students with magical English learning experiences, making English listening, speaking, and grammar courses more popular. Gamified education makes it easier to improve English scores and competency than standard teaching methods.

Learning objectives, English reading skills development, and language competency may all be improved through educational games. According to certain research, serious games might have a substantial influence on students' English proficiency and level.A good platform for demonstrating English proficiency in linguistic abilities and language pragmatics was offered by educational games.However, several research indicated that the impact of educational games on English learning competence was not sufficiently substantial. It may be said that there is no universal agreement about the value of educational games in college English instruction. The impact of educational games may be greatly diminished in some situations. Additionally, several writers highlighted the necessity for pleasure in learning, whether or not there were learning results [3], [4].When considered together, earlier research gave crucial insights into instructional games that aid students' college English ability. Educational games may enhance students' overall language acquisition and have a good impact on English learning. In educational settings, these claims need to be further supported. The following research question has thus been raised:RQ1: Can educational games improve students' ability to speak English in college?

Attitude and Acceptance in Learning College English:

The attitude and acceptance of the learner are two additional crucial variables that affect the effectiveness of game-based learning, which in turn forms the game-based learning model and affects the learner's self-awareness, level of technological acceptance, and learning. A case study on learning English vocabulary found a correlation between gamification experiences and learners' attitudes. Compared to typical classrooms, educational games intrinsically engage students because they encourage self-awareness and self-regulated learning and require them to participate actively rather than just listen. Regarding views towards English classes, there isn't a lot of notable resemblance or compatibility between the groups in educational games and the group in nongame scenarios. Academic English accomplishment exams for learners who used game-based learning fared higher than those who didn't. The research made an effort to investigate the relationship between educational games and students' views on accepting studying college English.The positive acceptability of technology-based English learning among students might be greatly increased. Both the acceptability of technology by learners and their learning capacity grows.

Serious games have the potential to enhance student learning outcomes and increase learners' acceptance of learning. It is essential and meaningful to learn in a gaming environment and via immersive encounters. As a result, educational games are better at enticing students, which helps increase their acceptance of game-based learning.

DISCUSSION

Through previous research, it was shown that educational games might alter students' attitudes towards and acceptance of learning college English in general. Gamification has a favourable effect on the general learning attitude and the adoption of effective techniques. Additionally, educational games will aid instructors in deliberately encouraging children to learn English. The ability of learners to apply their information in educational games to real-world situations may be a sign that gamified experiences are accepted in terms of knowledge application. The following research topic has thus been brought up:Since they provide players ample flexibility, serious games may offer entertaining, engaging experiences that encourage students to experiment with fun ways to complete objectives. Additionally, studies have shown that having fun while playing video games might enhance cognitive functions as well as emotional and social problem-solving. In this research, the relationship between educational games, enjoyable activities, and cognitive load during college English learning was examined.The entertaining elements of instructional games may significantly reduce the cognitive load rate on students. Activities for learning English combine entertaining elements with game-like experiences. Exciting experiences are beneficial for easing the cognitive burden associated with studying English in college. "English is not easy, but I like it," said the learners." An increase in anxiety is the side effect of listening to a foreign language. Educational games may provide a pleasant and comfortable learning environment and lessen learning anxiety.Reviewing comparative research, we often discovered some connections between the enjoyable experiences produced by instructional games and cognitive burdens. Here, just a broad discussion of cognitive burden was made. The following research topic has thus been brought up:RQ3: Can educational games' entertaining experiences lessen the cognitive demands of learning English in college?Rapid evidence assessment review was used in the study design. We chose journal papers from both national and international publications. By searching for and extracting keywords related educational games and college English learning, we analysed a number of significant perspectives from two dimensions based on certain criteria. We looked at the outcomes in detail[5], [6].

The three stages used in the research to choose academic articles were academic journal searching, keyword clustering, and results extraction.To guarantee that all publications are relevant to the same subject, the author does a literature search using All Fields. By enteringas All Fields in the Web of Science database, the author received 19,939 results.The author eventually reduced the number of publications to 481 by restricting the Web of Science Categories to Educational study, entering as All Fields in the Web of Science database, looking for almost three years for papers that were very pertinent to the study topic, and deleting lower-quality papers. Using the programme VOSviewer, we conducted research over the bibliographic network and obtained a data map from the Web of Science database.We set the minimum number of occurrences of a keyword to 2 by selecting co-occurrence as the analysis type, total count as the counting technique, and all keywords as the analysis unit. 41 of the 246 keywords match the criteria. The overall strength of the co-occurrence relationships between each of the 41 keywords was computed. The search terms with the strongest overall link profile were chosen. We determined the total strength of links between each of the 41 keywords and selected the keyword with the highest overall link strength. Seven categories and 41 items were created from the keyword data.The author chose research with strict design criteria that used quantitative, qualitative, or mixed methodologies.

The author used a manual search technique to find the information. The research selected the phrases educational games, satisfaction, learning college English, impact, character, and attitude as All Fields using the Boolean search technique. The author used the following techniques to restrict the findings and further improve them.Results that date from January 2008 to September 2017 were chosen by the author. Studies on game-based learning began in several areas in 2008, but they didn't pick up steam until, when they suddenly exploded, peaking in 2015. A drop was seen in 2017 and 2018. September 2018 marked the retrieval of the data. Thus, investigations that were pertinent in 2018 were not fully disclosed.The outcomes between January 2008 and September 2017 were chosen by the author. Some academic fields began doing gamified learning research in 2008; it was held at a modest level until it exploded in 2013 and peaked in 2015. In 2017 and 2018, there will be a drop. The data was obtained in September 2018, however the complete results of the pertinent studies in 2018 were not made public.A combination of inclusion and exclusion criteria were utilized to improve the findings and produce articles of the highest quality. The following criteria were used to determine which studies should be included: studies that examined the effects of educational games, serious games, college English learning, teaching, and learning; studies that focused on these effects; studies that examined the effects of educational games, serious games, college English learning, teaching, and learning effects in the context of game-based college English learning in comparison to other contexts; and studies that used different research methodologies from the studies that were ultimately chosen.The following studies were excluded from consideration: those completed before January 2008 and those completed after September 2018; those that did not examine the effects of teaching and learning in the context of game-based college English learning; those that were book Chapters, reports, or unpublished works; and those that did not compare the game-based college English learning context to other contexts[7], [8].

The study looks at the connections between educational games and college-level English proficiency, attitudes of learners towards and acceptance of learning college-level English, and the relationship between cognitive loads and enjoyable experiences produced by educational games. We discovered a strong beneficial relationship between educational games and college English instruction and student learning.Educational games help students learn the English language and have a favourable influence on their college English ability, according to a study including qualitative data. Educational games improve learning performance and real English level, according to assessment systems' information feedback on the level of English learning performance.According to recent research, instructional games may provide useful information. The academic performance of pupils, particularly in the area of language abilities, may be improved via game-based learning. Research revealed that using a game-based learning strategy significantly improved the English competence of undergraduate students. Simultaneously, game-based learning may successfully lessen disruptions from conventional classrooms.Students' academic performance may increase while learning English via computer games as well as their language skills. Learning English using educational games was surprisingly beneficial, particularly in terms of vocabulary development. The availability of games and gaming features were helpful for vocabulary acquisition. To improve vocabulary ability in paper exams, educational games may be used. Serious games were crucial in fostering the acquisition of English vocabulary, according to research. Educational games have a significant impact on language learning and competency via pedagogical practices. As a result, game-based learning may have a direct impact on students' ability to speak English.As a result, instructional games aid in language acquisition. According to several research, instructional games have harmful effects.

Additionally, there was insufficient empirical data to support the claim that playing educational games enhances language ability and competency. Even if there are disagreements about instructional games, various researchhas shown a favorable influence on

college English competency.According to certain research, language learners' attitudes might be markedly improved when instructional game objectives were met. Educational games encouraged self-regulated learning and shaped students' views. The attitudes of language learners towards studying English are improved via educational games. According to some surveys, Chinese college students majoring in English or English translation were able to share insightful observations about their language learning while participating in game-based teaching and learning processes.According to several research, instructional games were well received because they had game-like structures, appealing visuals, and were enjoyable. Researchers examined the possibility that educational games may support students' learning in the classroom or online, either individually or in groups. In addition, educational games may provide awards, prizes, and useful feedback to encourage players to improve their English learning. The student is "put in a decision-making role" via educational games, according to. Additionally, certain educational game treatments may be created specifically to enhance students' attitudes towards learning.

The popularity of educational games is only growing, and this has a favourable effect on students' attitudes towards and acceptance of studying college English. In instructional games, English learners could feel more positive and self-assured. Then, since educational games are timed to match learners' aptitudes, their positive attitudes may encourage students to enhance their English learning. As a result, the research lends credence to the premise that educational games might improve students' attitudes towards and acceptance of studying college English.Students' fun experiences and cognitive burdens cannot be disregarded when we look at the English results based on educational games. Success in English appears to depend on having a strong gaming background, particularly for second language learners.

It was impossible to prevent the influence of enjoyable gaming familiarity on English ability in game-based learning. With instructional games, gaming might greatly increase English proficiency and lower cognitive stress. The empirical investigation found that while the pretest demonstrated that the language abilities of all students were almost identical, the gaming group outperformed the other groups by a substantial margin. Unexpectedly, there was a negative correlation between learning results and total cognitive load.Anxiety is often present while learning a new language. Learning performance and anxiety levels are inversely related. Anxiety levels were shown to be influenced by gaming performance, which in turn impacted participant performance while learning English using games. In typical classroom settings, high-anxiety students had inferior performance; in gaming environments, high-anxiety and low-anxiety students showed comparable performance.

High-anxiety learners may benefit the most from digitally focused learning since educational games can considerably lower high-anxiety students' anxiety levels while they are learning a language.But some academics have reservations about instructional games. If the enjoyment factor is removed, instructional games become chocolate-covered broccoli. Some competitive games may frustrate disengaged and underachieving English language learners. Users and game creators balance the instructional and entertaining elements of games to some extent. But generally speaking, educational games continue to be a fun addition to college English study.Overall, the impacts of educational games on reducing cognitive burdens with college English learning are mediated through fun experiences.

The research discovered that educational games' entertaining experiences help lessen the cognitive demands of studying English in college.The study focused on three key points: educational games can improve learners' attitudes towards and acceptance of college English learning; educational games can reduce cognitive loads in college English learning; and educational games can positively impact college English proficiency. The strategic uses of educational games for future language acquisition and instruction have been covered.

The Importance of English Fluency in College English Instruction:

The average level of English proficiency among college students is considered to be modest, and some are much lower. English, meantime, is a tool for communication as one of the most widely spoken languages in the world. When assessing a student's performance in studying English in college, English competence is vital. Increasing competency is one of the objectives of studying English in college. To improve students' language ability, educational games should be carefully integrated with English language features. On the other hand, to improve English results, it is vital to enhance the connection between students and educational games and to maximise the benefits of educational games for students.The attitudes of students towards learning may be favourably impacted by educational games. Although they invested much more work in the game-based learning experiment than they did in the conventional classroom, students were more motivated to study for tests. Outstanding student achievements may show how well game-based learning works and encourage English proficiency. The research found that students' views towards and acceptance of game-based methods to English learning are favourable. The intrinsic and extrinsic effects of educational games on students' attitudes are considerable.A paradigm of genuine learning was developed using the entertaining and positive affordances of educational games, which may integrate active pedagogy with immersive English learning. Game-based learning might easily assist English learning as opposed to classroom instruction, which could increase cognitive demands. A gaming environment offers students a comfortable and unthreatening setting. It lessens the danger posed by the conventional classroom, which might be due to reduced cognitive load ratings and a fear of making errors [9], [10].

CONCLUSION

In order to enhance students' attitudes and their learning effectiveness, the research primarily focuses on the integration of educational games into the college English teaching and learning process. We discovered a significant link between studying English in college and instructional games. Further research revealed that educational games might improve students' attitudes towards and acceptance of college English study while also having a favorable influence on their college English ability. As a result, educational games' fun experiences help lighten the cognitive strain of studying English in college.We discovered that educational games may have a favourable influence on college English proficiency in all areas of English. This is in reference to the overall beneficial impacts of educational games on college English proficiency. The study and teaching of English should include instructional games.Additionally, we discovered that educational games had a significant intrinsic and extrinsic impact on learners' attitudes towards and acceptance of studying college English. From now on, we have to include educational games into the teaching and learning of college English.Finally, we discovered that playing educational games helped learners relieve cognitive stress during English learning activities and might help establish a pleasant and relaxed atmosphere. We should logically integrate educational games into the study and teaching of college English.

REFERENCES

[1] J. Martín-Gutiérrez, C. E. Mora, B. Añorbe-Díaz, and A. González-Marrero, “Virtual technologies trends in education,” *Eurasia J. Math. Sci. Technol. Educ.*, 2017, doi: 10.12973/eurasia.2017.00626a.

[2] S. A. Haris and F. N. Khasanah, “Pengujian Aplikasi Pengenalan Dasar Islam dan Surat Pendek pada Anak Berbasis Game Edukasi,” *Inf. Syst. Educ. Prof.*, 2018.

[3] V. Loerzel, J. Clochesy, and P. Geddie, "Using a community advisory board to develop a serious game for older adults undergoing treatment for cancer," *Appl. Nurs. Res.*, 2018, doi: 10.1016/j.apnr.2017.11.030.

[4] E. V. Soboleva, A. N. Sokolova, N. I. Isupova, and T. N. Suvorova, "Use of training programs based on gaming platforms for improving the effectiveness of education," *Novosib. State Pedagog. Univ. Bull.*, 2017, doi: 10.15293/2226-3365.1704.01.

[5] D. Abrahamson and M. Kapur, "Reinventing discovery learning: a field-wide research program," *Instr. Sci.*, 2018, doi: 10.1007/s11251-017-9444-y.

[6] P. Felicia, "Digital games in schools: A handbook for teachers," *Eur. Sch. Games Sch.*, 2009.

[7] F. Bellotti, R. Berta, A. De Gloria, A. D'Ursi, and V. Fiore, "A serious game model for cultural heritage," *J. Comput. Cult. Herit.*, 2012, doi: 10.1145/2399180.2399185.

[8] M.-E. Del-Moral Pérez, "Videogames: opportunities for learning," *J. New Approaches Educ. Res.*, 2014, doi: 10.7821/naer.3.1.1.

[9] C. J.-D., B. D., and B. M.-A.B., "Development of the first video game aimed at children suffering from Juvenile Idiopathic Arthritis," *Pediatr. Rheumatol.*, 2017.

[10] R. E. Ferdig, J. Coutts, J. Dipietro, B. Lok, and N. Davis, "Innovative technologies for multicultural education needs," *Multicult. Educ. Technol. J.*, 2007, doi: 10.1108/17504970710745201.

CHAPTER 8

A STUDY ON PREDICTION ABILITIES AND READING EFFECTIVENESS IN COLLEGE ENGLISH

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ABSTRACT:
The accuracy of scoring results is verified and the experimental results are analyzed using two datasets in this paper. Finally, under the guidance of writing feedback theory and data visualization design criteria, a reasonable visualizable writing feedback is created. This paper conducts an in-depth study and analysis of college English prediction skills and reading efficiency using an optimized BP network algorithm, which is designed separately. The similar nearest-neighbor user dataset used for training had considerable information loss, and there were occasions when certain things were evaluated by the target user but not by similar nearest-neighbor users, according to the learning and training of the BP neural network model. As a consequence, the neural network learns with a large loss of important information and is rendered worthless during training. In order to solve this problem, this study suggests filling the matrix using the singular value decomposition method, which reduces the sparsity of the filled matrix data and increases the precision of the suggestions. The second class of models includes both scoring models created using 1D CNN and LSTM networks, and this kind of "end-to-end" scoring model does not involve feature engineering. The model is then trained and put to the test utilising 650 spoken recordings and the related manual score data. The experimental findings demonstrate that the BP network model gets a superior overall score performance with a less training dataset.

KEYWORDS:

Accuracy, Decomposition, Reasonable, Visualizable.

INTRODUCTION

In the modern world, the quick development of computer and network information technology not only offers multiple platforms, means, and locations for teaching English, but also expands opportunities for communication between teachers and students, leading to increased access to information sources and channels. Even the philosophy, techniques, and educational practices of English teaching have been encouraged to innovate and adapt by the advent of digital technology. As a result, there have been significant methodological shifts in English teaching and learning, and multimodal teaching is now a widespread practice. Computer and information network technologies provide rich multimodal discourse resources for teaching English reading that may assist students in integrating into situations and settings and increase their prospects for language acquisition and language usage. Teaching reading has always been difficult in English language classrooms, nevertheless, since reading comprehension is an act of inner activity [1], [2].

The simplicity, clarity, and speed of search engine technology are its most notable advantages. Search engines may be very beneficial when the user has a reasonably clear search objective; but, when the user's objective is foggy, search engines are less successful in delivering the appropriate results. Instead of using the user's input of keywords as the foundation for the search results, search engine technology ignores the user's interests, producing information that is not personalized. If a user types "comedy" into a search engine, all of the films with that genre's title will appear in the results; however, some users prefer

comedies from particular nations, while others prefer comedies starring particular actors, and this customized information cannot be accurately provided to the user using search engine technology.The main goals of teaching English reading are to support the development of students' all-encompassing language use skills by assisting students in learning English phonetics, vocabulary, grammar, discourse, and other knowledge through reading, accumulating English learning experience, developing cultural awareness, cultivating English reading habits, and mastering specific English reading skills. It demonstrates that pupils' capacity for independent learning has improved significantly. Students effectively transform the classroom into their own learning space. They are able to actively think while learning, carefully adhere to the instructor's guiding principles, thoroughly incorporate the instructor's instruction into their own learning, and dare to put forward questions. As a result, reading is crucial for learning English as well as one of the goals of teaching it.

Students' reading focus will gradually change from being primarily learning to using English to get information and experience the true purpose of English reading at this point because they have the knowledge, experience, cultural awareness, habits, and skills about English reading that enable them to read English effectively. The primary emphasis of English instruction at the undergraduate level is reading as one of the English language skills. The goal of reading teaching is to foster students' subjective initiative in reading English so that they may go from passive reading to active information-seeking outside of the textbook and enhance their reading proficiency on their own.

The saying "knowledge is important, but not the method" weakens students' autonomous learning awareness and prevents them from genuinely acquiring and implementing the knowledge obtained because of the restricted classroom teaching time and knowledge inculcation. The online course makes up for the shortcomings of classroom instruction by giving students more learning options and specialised training in reading strategies, allowing them to fully express their reading initiative and creativity. It also has the advantages of not being constrained by time or space and strong autonomy[3], [4].

The fundamentals of BP neural networks and SVD data-population techniques are thoroughly examined after which the influence of popularity on user similarity calculation and the popularity factor, a concept that is added to the similarity calculation formula to lessen the weight of popularity, are examined. It is then discovered that the classical Resnick rating formula used in the final rating prediction stage only contains the target user's rating information and the ratings of users in the similar nearest-neighbor set and does not delve deeply into the information between users. The details of the traditional user-based collaborative filtering recommendation algorithm process are then discussed. To solve this shortcoming, it is suggested that the BP neural network be used in lieu of the original Resnick formula; the creation of the neural network model is also discussed. The data of the comparable nearest-neighbor user item-rating matrix is found to be exceedingly sparse throughout the model-building process, which results in the loss of a large quantity of important information. This research suggests that before creating the BP neural network model, the same nearest-neighbor user rating-item matrix be filled with data using the SVD approach to address the data sparsity issue.

A single variable's value or range of values for each sample is predicted given a variety of the variable's characteristics. Classification and regression are the two subtypes of issues that fall under prediction. Classification is the study of which model characteristics are crucial for making predictions, and it offers details on the underlying class labels. Regression is the use of regression for the purpose of making predictions, providing details about the underlying class labels, and identifying any linear or nonlinear rules that may be present. Learning dashboards are also known as digital learning dashboards. Their design was influenced by car dashboards, and as they were gradually applied to the field of education, they evolved into

the current learning dashboards. Learning dashboards also belong to the category of typical intelligent and integrated online learning systems. Through websites or mobile phone APPs, individuals may now study anytime, anywhere, and without regard to time or place, which has the benefit of allowing people to use spare time to the fullest and significantly aids in students' learning. The introduction of several new learning models has been aided by the growth of the information economy, but Internet-based online learninga brand-new method for users to study on online education platforms, is the most significant of all learning models.

In order to provide the neural network some memory capacity and the ability to generate accurate predictions using associative memory once the neural network model is complete, the Hopfield network model incorporates associative memory. The BP neural network technique resolves the issue of vanishing gradients of implicit units in multilayer networks by reducing the number of operations from square to merely proportionate to the number of neurons. The quality of computer hardware during this time period also significantly increased, and artificial neural networks once again entered an era of fast growth. The challenging training of multilayer network parameters was a problem that the suggested BP method partially resolved, although it still has certain issues of its own, including the following: First, the gradient vanishing issue was partially resolved by the backpropagation method, but the gradient still disappears, making deep artificial neural networks challenging to design. The holding vector machine, a machine science method, was introduced in the 1990s, and the technique outperformed the God artificial neural network in a number of disciplines.

Based on the connection between learning strategies and linguistic information, learning strategies may be split into two basic categories: direct strategies and indirect strategies. Six subcategories of tactics may be derived from each of these two groups. One of them is reading tactics. Cognitive techniques for reading include, for instance, practise, intake and output of information, analysis, reasoning, and use of contextual conditions. Some memory techniques include creating internal links, employing sounds and pictures, thorough study, and using physical motions. A few examples of compensatory reading techniques include category speculating, making educated guesses, employing previous knowledge and information, and referencing literature and dictionaries. Metacognitive reading techniques include reading with purpose, paying attention, planning, and scheduling, as well as self-monitoring and self-evaluation. One of the most efficient reading techniques is to recognise one's emotional shifts, practise self-encouragement, and lessen reading anxiety. Last but not least, social methods for reading include actions like working with peers, asking questions, making adjustments, and responding to criticism[5], [6].

DISCUSSION

Due to its simplicity and ease of use, the BP neural networka multilayer feedforward network trained by the error backpropagation algorithmis extensively utilised in a variety of industries. The BP neural network is trained by extracting the information suggested by the historical data from the obtained historical data. Neural networks are often used in the area of recommendation because to their higher generalization, fault tolerance, and nonlinear mapping capabilities.A BP neural network typically has three layers: an input layer, an implicit layer, and an output layer. Each layer typically has at least one layer, and the number of nodes in each layer depends on the issue at hand. The input layer has n nodes, the hidden layer has q nodes, the output layer has m nodes, the input is an n-dimensional feature vector, the output is an m-dimensional feature vector, and is the connection weights between the input layer and the hidden layer. Since a BP neural network with one hidden layer can solve most nonlinear problems, a single hidden layer BP neural network is typically used. The BP neural network training procedure typically consists of two steps. The input signal is passed

through the input layer into the hidden layer, where it is processed by the hidden layer's activation function before being passed to the output layer, where the prediction results are output after processing by the output layer; the second stage: if the error between the predicted value and the actual value finally obtained through the output layer does not meet the predetermined accuracy, the hidden layer is activated until the error is within the predetermined range. The intended output and the kth input sample are selected at random.comparable to this, we examined the Resnick formula and found that it ignores the implicit impact of comparable users' ratings as well as the link between users by just considering the rating records of individual users. A BP neural network can learn a variety of input-output patterns mapping connections and store them in the form of structural parameters, making it the perfect tool for examining user interactions without the need to demonstrate and explain the mathematical equations of mapping relationships. We suggest substituting the BP neural network for the Resnick formula for predicting target user ratings in order to overcome the aforementioned Resnick formula drawbacks. The benefit of using a BP neural network is the ability to delve deeper into the specifics of user evaluations, leading to suggestions that are more accurate.

Choosing a method for obtaining the input and output feature vectors is necessary for building the BP neural network model. First, we exclude things that are not rated and utilise the frequency of various ratings for each item in the collection of comparable users as the input feature vector for the best rating prediction module of the BP neural network. In the experiment, six, seven, eight, and nine hidden layer nodes were chosen. The number of iterations and learning rate during data filling and neural network training are adjusted to greater and lower values, respectively, to assure the experiment's correctness.where is the total number of words used during the test-taker's speaking, t is the length of the speaking recording as a whole, and ts is the length of the recording's quiet. Along with the speech rate feature, the quantity of silences in the tape also, to some degree, represents the test-taker's speaking fluency. Many speaking scoring systems employ the pronunciation posterior probability characteristic to evaluate pronunciation quality, and this study also uses it to characterize the precision of test-takers' pronunciation.The use of a variety of assessment techniques throughout the educational process helps to promote students' overall development and allow for a thorough evaluation of the learning outcomes. It is possible to organically combine diagnostic, formative, and summative assessment; both the teacher and the students should be involved in the evaluation process; and a variety of evaluation techniques, such as student mutual evaluation, teacher-student mutual evaluation, and student self-assessment, can be used. Teachers can complete formative evaluation of students based on their platform login situation, course learning hours, question and answer situation, test situation, and other factors. Students can evaluate their peers based on their peers' performance in group collaborative learning, and so on. Teachers can perform a diagnostic evaluation of students' prestudy before class based on their platform login situation and prepare for the class. Therefore, using a variety of assessment techniques may increase student engagement in class activities, boost their drive to learn, and so support educational change[6], [7].The dynamic process from audio input to final score output is referred to as intelligent speaking scoring. The speech noise reduction module first reduces the noise in the candidate's speaking records, and then the speech recognition engine cleans up the recordings and converts them into the relevant text. In general, it is not advisable to use characteristics with a correlation value below 0.2. The intelligent scoring system should include several aspects of the examinee's spoken language. We determine the cross-correlation between the chosen characteristics for each set of features with a correlation coefficient larger than 0.9 since features with a high degree of similarity shouldn't be used together. The data processing module then separates speech-like features from text-like features from voice recognition text and speech-like features from clean recordings, adding each kind of feature to the speech scoring model and text scoring model separately. The last step is to add the outputs from the

two scoring models to get the final score. The purpose of utilizing two scoring models in this paper—the voice scoring model and the text scoring model—instead of the general scoring system's single scoring model, which is meant to suit the feature values, is primarily to increase the scoring system's accuracy. Additionally, instructors evaluate applicants' speaking at the speech and content levels independently in a real-world marking setting. As a result, this design is compatible with the manual scoring method.Most pupils would turn to rote learning when given the job of learning English reading, progressively losing the capacity to understand the reading issues. Students are busy taking notes when the teacher emphasizes them when explaining words, testing vocabulary, or analyzing the structure of passages, for example, and active class participation is misinterpreted by students as not missing notes and missing various language points. Students also pay more attention during the listening process to the grammar points, sentences, or passages that the teacher asks them to memorise. Furthermore, pupils interpreted each line on its own, omitting the relationships between them . Because of this, students' ability to think critically and apply what they have learned to real-world circumstances is somewhat hindered.

Association rule mining, correlation mining, sequential pattern mining, and causal data mining are the four main categories of connection mining. Finding the if-then rule of the kind, which states that if a collection of variable values is discovered, another variable will typically have a certain value, is the aim of association rule mining. Finding temporal relationships between occurrences and mapping the trajectory of student behaviour to the learning interest event are the two main objectives of sequential pattern mining. In the case when an instructive event is randomly chosen using an automated experiment and often results in a successful learning outcome, the objective of causal data mining is to determine if one event is the cause of another occurrence.Association rule mining, correlation mining, sequential pattern mining, and causal data mining are the four categories of relationship mining. It is a statement that deviates from accepted grammar, to put it simply. It is often present in the writing of English language learners and is a frequent error committed by novices, particularly in the usage of different subordinate clauses and tenses. These mistakes are often seen in the writing of English language learners as well. These mistakes mainly take the form of verb misuse, which is often acceptable in terms of grammar rules but results in semantic ambiguity from the perspective of the usage of verbs in context[8], [9].From the perspective of the user who uses it, personalised recommendations can be seen as an effective information filter that aids in decision-making. It organises our historical behavioural data, product ratings, click-through rates, and other information before performing data analysis using mathematical techniques like data mining to predict which products, we are most likely to like and provide us with more relevant recommendations.where and represent, respectively, the user and user average ratings of the rated items. The average user rating for the item is subtracted in order to lessen the accuracy issue brought on by the scale issue. According to an analysis of the company's brand, personalized recommendations are a potent tool for comprehending the needs of our users. By meeting those needs with the most popular products, we can attract customers and strengthen our position as a leader in the market. Many e-commerce platforms now use personalized recommendations, and some even use multiple algorithms. For instance, "Dangdang" users will not only display links to information about other mobile phone brands at the bottom of the purchase page, but they will also display the number of people who purchased the phone next to the information link. It is possible to use a variety of assessment techniques, including student-to-student and teacher-to-student reciprocal evaluations as well as student self-evaluations. Based on the login state of the student platform, teachers may do diagnostic assessments of students' preview conditions before to class to prepare for the lesson. This information provides the buyer with a buying guide, making it simpler for the user to choose the goods.

A, B, C, and Dare the objects, while X, Y, and Z are the users. Items A, B, and C are favorites of X, Y, and Z, whereas item D is favored by Z. All of these users rate their favourite products; if we want to suggest items to user Y, we first determine the target user's similarity to other users using the similarity formula, and then we exclude the set of people who have the target user's interests in common the most. We'll go into more depth about the formula later. Because user X and user Y in the example have similar interests, we may assume that they are comparable neighbours and that their interests are more similar. The things that the target user has not yet rated but that the neighbouring users like are suggested to the target user. For example, if user x loves item C but user Y has not yet rated it, item C is recommended to user Y. There are numerous things in actual practise; typically, we utilise the Resnick rating method to determine the target user's rating of unrated objects before sorting the ratings. According to the target user is suggested the top N products with the highest ratings.Based on the aforementioned ideas, the user-based collaborative filtering recommendation algorithm is appropriate for situations where things change fast, such as news apps. However, when dealing with a big number of users, determining user similarities may be challenging, and user interests vary with time, making it challenging to capture hidden elements like interests and to document the process of change quickly. An item-based collaborative filtering algorithm may be taken into account in this situation. The item-based collaborative filtering algorithm works better for suggestions in domains with a big diversity of long-tail items and is best suited for situations where the number of things is much less than the number of users.

Prior to implementing machine learning, feature extraction is a crucial step that affects the scoring model's confidence and accuracy. Even if the neural network model used to calculate the score is not ideal, a scoring result with less error may still be reached provided the features are chosen carefully enough. Two primary categories of dataspeech-like features and text-like features are retrieved in the BP neural network-based scoring model that is the subject of this article. Text-like features are taken from the speech recognition engine's output whereas speech-like characteristics are directly retrieved from the spoken signal.The target user's actual scores of 2 and 3 for Items 1 and 2 are utilised as the predicted output value, and the BP neural network model that was developed is used to forecast after learning and training. Before features can be retrieved using correlation approaches, a feature screening exercise is often necessary. By manually assessing each characteristic and computing its Pearson correlation coefficient, the significance of each one may be determined. Typically, no item should be chosen if the correlation value is less than 0.2. We determine the intercorrelation between the chosen features and eliminate one of them for each pair with a correlation coefficient greater than 0.9 in order to create an intelligent scoring system that will accurately describe the candidate's speaking in multiple dimensions and avoid using features with high similarity simultaneously. With the exception of semantic similarity features, which are strongly correlated with reference text answers because this paper targets open-ended speaking scores, open-ended speaking questions typically lack a fixed reference answer. This leads us to select generic features rather than features that are strongly correlated with reference text answers.Learning outcomes in reading are analyzed, judged, and self-regulated in accordance with reading course learning objectives or self-established reading learning programmed goals as part of effectiveness assessment procedures. Analyzing the qualities of the reading content that has been studied and the person's reading comprehension abilities falls under the category of evaluating reading learning outcomes. Students are encouraged to regularly and intentionally assess their reading outcomes and gauge their progress towards predetermined targets.A crucial element in helping students finish their online English reading study is comprehensive, timely, and effective learning assistance. It may successfully lower students' anxiety levels when they encounter challenges. The two parts of learning assistance are support services and support tools.

Support services may be offered by computers, instructors, or other students and include online academic courses, Q&A sessions, discussions, and outcomes assessment. The output layer is then processed to output the prediction results. In the second stage, the error information will be fed back in reverse and the weight of the information will be transmitted if the difference between the predicted value and the actual value obtained through the output layer does not meet the predetermined accuracy. A bias adjustment is made layer by layer. Computer network technology and applications such as online dictionaries, audio and video players, and timers are examples of support tools. These programmed and resources make up a complete learning support system.

The standard "blackboard-textbook" reading education paradigm is less successful than the multimodal reading instruction model at increasing pupils' reading comprehension. They contend that multimodal instruction is more in-depth than single-modal language explanations and stimulates students' multiple senses, greatly enriches and enhances the comprehensible input of information. This, they claim, can help students retain information and increase their capacity to understand and construct the meaning of the discourse. The study concluded that a smart technique to raise students' reading proficiency and comprehension abilities is to use multimodal education with conventional reading instruction methods.The quantity of neural nodes in the input, implicit, and output layers of the BP neural network that is being utilised must be determined. We use six nodes for the input layer because, as was already mentioned in Section 3, the input vector of the BP neural network uses the frequency of various ratings for each item and contains the number of users who gave each item a rating of 1 to 5 as well as the number of users who gave no ratings, for a total of six feature values. The prediction of a single-item prediction value is the output of the BP neural network; hence the output layer only uses one number of nodes. The number of nodes in the hidden layer that are chosen has a significant bearing on how well the neural network performs; too few nodes may not have enough connection weight combinations to learn multiple samples, while too many nodes may limit the network's capacity for generalization after training. However, no reliable theoretical approach has yet been found to direct the selection of BP neural network architectures, which is often only done experimentally. In order to choose the number of nodes in the implicit layer that would provide reasonably decent results as the foundation for further trials, we employ experimental observations.

To ensure the accuracy of the experiments, the hidden layer was chosen to have 6, 7, 8, and 9 nodes. Additionally, the number of iterations and learning rate were set to larger and smaller values for data filling and neural network training, respectively.It is often employed for nonlinear, classification, and other issues where obtaining internal laws from observation is challenging. Neural networks are thus often used in the area of recommendation. The trials reveal that the BP-P-asks method produces the best results, while the modified Pearson recommendation algorithm performs just marginally better than the other two recommendation algorithms. The three improved recommendation algorithms' accuracy of the results showed a trend from low to high to low, with all of them having the smallest MAE value when the number of nodes in the hidden layer was 7. Since the highest accuracy was attained at this number of nodes in the hidden layer, this optimal empirical value was used to build the BP neural network in the following experiments.

When using gradient descent to optimise filled data, the number of iterations and the learning rate have an influence on the outcomes; too few iterations will lead to inadequate precision, and too many will take a lengthy time, which is unacceptable in reality, thus an appropriate value must be specified. Similar to this, a learning rate that is too high will cause oscillations about the minimum but not convergence to the minimum, while a learning rate that is too low would cause too lengthy of a convergence time.

As a consequence, experimentation is used to find the ideal iteration count and learning rate. To get the best results, the BP neural network's training number is set to 1000, learning rate to 0.008, minimal error to 0.1, and regular term parameter to 0.025. The maximum number of nearest-neighbor users for the target user is 50. The number of data filling iterations is set to 50, 100, and 150 in the growth of 50,300, and the learning rate is set to 0.006, 0.007, and 0.008. The outcomes of the studies on BP-P-pfc, BP-P-csc, and BP-P-acsc in the appropriate order. Real mastery and application of what has been learnt are unattainable. Online courses enable students to effectively use their reading initiative and creativity by giving them additional learning alternatives and focused training on reading tactics, making up for the deficiencies of classroom instruction[10].

CONCLUSION

In this study, we propose and implement an open speaking scoring system that, by automating the grading of applicants' speaking records, may assist instructors in reducing their burden. The experimental findings demonstrate the applicability of the BP network model, which improves scoring performance with a smaller training sample. With the aim of improving learners' awareness and proficiency in English reading methods, this project plans and develops an online college English reading course based on the procedure and normative specifications of online course instructional design. In order to better support students' independent learning and classroom instruction, the design process is focused on integrating macro theories into practical teaching, integrating reading strategy training with reading course teaching, and attempting to develop a process for designing and implementing English reading online courses. In order to gather more experimental teaching data, improve the teaching model, and increase the credibility and efficacy of its promotion, the researcher must continue to promote the practical application of the teaching model in future educational practise, not only in his own classroom but also in experimental schools as capacity allows. However, the final study findings must be summarised and modified as necessary throughout the real research process, and the planned online courses must go through more thorough application tests to confirm their genuine viability and efficacy.

REFERENCES

[1] F. A. Alnasir and A. A. Jaradat, “The effectiveness of AGU-MCAT in predicting medical student performance in year one of the college of medicine of the Arabian Gulf University,” *Educ. Heal. Chang. Learn. Pract.*, 2011, doi: 10.4103/1357-6283.101444.

[2] B. C. Martin, L. Partelow, and C. Brown, “Smart, Skilled, and Striving: Transforming and Elevating the Teaching Profession,” *About.com Educ.*, .

[3] B. C. Martin, L. Partelow, and C. Brown, “Learn about Education and Schools in New Mexico,” *About.com Educ.*, .

[4] M. Stephens, “Why extensive reading and listening to audio books may not be enough,” *Read. Matrix An Int. Online J.*, .

[5] J. A. Laub, “Assessing the servant organization; Development of the Organizational Leadership Assessment (OLA) model. Dissertation Abstracts International,” *Procedia - Soc. Behav. Sci.*, 1999.

[6] J. Lewis and B. J. Caldwell, “Guidelines for Preparation of Public School Financial Statements,” *Saica*, 2016.

[7] A. Balick *et al.*, “Identifying poorly met demand: The impact of product beliefs on attribute importance.,” *J. Mark. Res.*, 2016.

[8] D. D. Johnston *et al.*, “Cloud-Based Software Engineering,” *Comput. Educ.*, 2018.

[9] K. J. Kim *et al.*, “Six Strategies for E ff ective Learning,” *Handb. Self-Regulation Learn. Perform.*, .

[10] K. Shinozuka, S. Shibata, and Y. Mizusawa, “Effectiveness of Read-aloud Instruction on Motivation and Learning Strategy among Japanese College EFL Students,” *English Lang. Teach.*, 2017, doi: 10.5539/elt.v10n4p1.

CHAPTER 9

IMPROVING COLLEGE STUDENTS' PARTICIPATION IN ENGLISH ONLINE LEARNING IN A BLENDED LEARNING ENVIRONMENT

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ABSTRACT:
Online resources may satisfy students' desires for independent study and provide them with a diversity of English information while teaching English in colleges. Teachers should thoughtfully adapt their lesson plans to the peculiarities of each field and provide enough opportunity for student engagement in online self-study and training. Online education may therefore fully use students' free time. This essay examines the state of online English learning among college students today and suggests improvements. It does so in the context of blended learning. More than 88% of students can complete their online learning tasks on time, according to the report. When there are 60 experiments, 42.97% of them are able to complete online learning tasks on time, 29.51% are able to partly complete online learning assignments on time, and 21.94% are unable to. They follow up on online learning in a timely manner since autonomy and engagement are strong throughout the process and few people are in a passive state. The richness of the online English learning materials for college students in the blended learning environment serves as a foundation, and college English teachers can tailor the learning materials to their students' lack of practical experience, which significantly boosts college students' engagement in online English learning.

KEYWORDS:

Autonomy, Diversity, Improvements, Peculiarities.

INTRODUCTION

Teachers are progressively focusing on the use of internet resources in the creative growth of their instruction of English to college students. We can enhance the learning environment and infuse the English classroom with life with the use of information technology. The hybrid teaching approach should be used to direct students to carry out the in-class and after-class learning in an orderly manner in order to improve the autonomy of learning participation, make teaching more scientific, and aid students in acquiring more English knowledge. This will help students strengthen their English level and make information technology play a positive role in the English classroom. However, there is also a lot of uncertainty in the new model of English online learning, which is influenced by the quality of online learning platform curricular materials and students' engagement in online courses. Relevant researchers have discovered that although there is a high rate of enrollment in online English learning, there is a low rate of course completion, a dearth of excellent curricular materials, and a weakening of users' ongoing engagement in learning. Online resources may satisfy students' desires for independent study and demonstrate a range of English skills in university English instruction[1], [2]. Teachers should thoughtfully include the subject's qualities into their lesson plans and encourage significant student engagement in online training and self-study. Online education may therefore fully use students' free time. College students' practical knowledge is also situational, individualized, integrated, and reflective. Traditional college English instructors must finish building up their practical expertise by practice, summation, and a reasonable management of both online and offline learning participation. Students must get timely learning feedback whether they are studying online or offline. An

essential method of gathering information about the learning outcomes of students is to administer certain online examinations based on online learning platforms or other minor programmes. With the help of this input, we can focus educational activities in a way that both students and instructors can understand. These test activities will undoubtedly serve as a means of learning motivation if the outcomes of these brief tests are used as a significant foundation for process assessment. This mode can enhance students' learning materials and methods, boost the effectiveness of after-class self-study, and encourage learners to move from shallow to deep-to-deep learning, which can enhance English learning skills as well as the learning of other subjects.

We must increase instructors' comprehensive quality, including professional quality, before we can improve students' comprehensive quality and encourage college students to participate in English online learning. The present state of college students participating in English online learning in a mixed learning environment is examined in this article, and a factor model is developed for ongoing usage of the students' English online learning platform. This paper proposes corresponding improvement strategies for the University English online learning platform to adapt to the changes in college students' learning needs by examining the relationship between these influencing factors and college students' ongoing use of online education platform. Blended learning is a novel learning approach that brings together the benefits of multiple learning strategies within the context of contemporary educational information technology.

It primarily uses new online learning on network platforms and conventional offline classroom learning. It can not only provide students with complete learning autonomy but also serve as the primary source of instructors' direction, motivation, and monitoring in conventional classrooms. A popular issue in the reform of university English education is blended learning, which combines conventional and electronic learning. Blended learning, which includes some stereotypes, is being used progressively by more colleges as the foundation for English instruction. Blended learning should be at the center of the real implementation. However, there is little interaction between policies and online learning owing to subpar technology and linked but flawed facilities. These, undoubtedly, are the reasons why blended learning for university English has failed[3], [4].

In comparison to other learning styles, blended learning is more practical, effective, and gives pupils a feeling of accomplishment. The personalized learning requirements of students in the mixed learning environment are now better satisfied, and the students' autonomous engagement in learning has also been significantly increased as more and more front-line instructors actively endeavor to implement mixed teaching reform. In contrast to the ongoing model of students as passive consumers of inputs from the outside, teaching design should place learning at its core and students as its primary source of knowledge. A good approach always supports the educational objective among other important considerations. It's crucial to know how to create the right learning programmed, in particular. A distribution strategy is thus required since college students who participate in English online or distance learning are genuinely remote from their instructors.

The way that technology and the learning environment are designed affects the teacher-student relationship. The outcomes of learning will be significantly impacted by the presence of spatial learning. Effective online teaching is the outcome of properly conceived and planned instruction, according to decades of research on the subject. Additionally, university English teachers can tailor the learning material to college students' lack of practical knowledge through the enrichment of their English online learning curriculum in the hybrid learning environment, which significantly increases their engagement in English online learning.

The following innovations are suggested for this paper:

A paradigm for involvement in English online learning is put forward. Upload lesson materials to the "group file"; after class, publish assignment using the "homework" feature. As part of their different types of homework, students may turn in images, papers, and films. The "micro class" function is used effectively to thoroughly clarify typical difficulties. Interactive material is incorporated to the English online learning curriculum design in order to minimize the boredom brought on by instructors' single instruction throughout the teaching process. First and foremost, encourage students to connect what occurs in real life to what they learn in class, develop their capacity for divergent thought, and boost their love for learning. The use of blended learning in online English learning is examined in this research. Different strands of English education should use blended English instruction. Teachers should create study strategies to help students successfully self-study during the preview phase so that technology may be used to preview more effectively.

With the aid of cutting-edge information technology, children may readily get extracurricular learning materials and repeatedly hear the pronunciation of terminology; but, since there are so many resources available, they are more likely to become disoriented[5], [6].The context and importance of college students studying English online are introduced in the first Chapter, which then presents the paper's major work. The research state of English online learning and the research methodologies for English online learning that are suggested in this study are mostly introduced in the second Chapter. The third Chapter covers involvement in English online learning and the use of blended learning in English online learning while analysing the study methodologies. The execution of simulation experiments and analysis of the results are covered in Chapter 4. The whole book is summarised in the fifth Chapter.

DISCUSSION

The effectiveness of the review is especially crucial as the level of difficulty and knowledge increases. Following the adoption of blended learning, students may exercise more autonomy, repeatedly master the material covered in microcourses, and acquire a growing vocabulary for use in conversation. In order to enable students to develop their self-awareness, it is essential to consistently promote the combination of online and offline learning. Both the after-class review and the in-class instruction are beneficial. The review goals may be precisely established and the English level can be raised via self-examination and self-reflection.According to Gao et al., more college students are willing to continue using English online education platforms for learning the more compatible the platform is, the more logical the layout design is, the clearer the video images are, and the better the audio quality is . In order to innovate online education and change learners' behaviour, Kong advocated that the online education platform supported by institutions of higher learning make full use of high-tech components including cloud technology and big data artificial intelligence. Particularly, the emergence of mobile terminal devices like smartphones and tablets has made it possible for English to be taught online at higher education institutions. As a result, many students embrace and prefer online learning. When making comments, teachers should integrate both online and offline learning scenarios, Hu suggested. They should also objectively assess their students' learning attitudes and learning outcomes to ensure that they place equal value on online learning and actively seek out resources to increase their learning autonomy. Chen suggested that the foundation of online learning platform service provision in institutions of higher learning is high-quality English teaching courses. In order to attract more students and encourage their desire to continue online learning, experienced instructors must provide high-quality and high-level English courses if an online learning platform hopes to endure for a long time and keep its high popularity. According to Truong and Wang, there is a strong association at the level of 0.01 between college students' opinions of the value of the English language teaching materials offered by an online platform and their desire to keep

utilising these platforms to study English. A substantial association is shown by Pearson's correlation coefficient, which is 0.745. According to Liu et al., teachers should help students conduct self-evaluations, identify the drawbacks of online English learning in relation to college students' learning objectives, and carry out an orderly review with the aid of classroom notes and micro-course materials during the review phase. Because they are used to reviewing from start in accordance with the learning sequence, many students struggle to understand the review's main aspects, which results in a poor understanding of the review's crucial concepts. Zhang demonstrated how enhancing the real-time interactive features of online English learning platforms and systems, such as online tutoring and online replying, may increase their usability. Students should also have access to a variety of online activities, including interactive games, contests, and communities. Students' learning initiative may be encouraged via prompt feedback and in-person engagement. According to Chunlin et al., college students who utilise an online education platform for English learning are loyal to it if they are ready to use it continually. The degree to which college students are eager to utilise an online education platform continually may be determined by how often they use it or actively advocate it to one another. Chun intended to bolster instructional support while enhancing the intelligence of websites and systems for online English learning. In the process of creating websites and systems, we should give careful thought to how to maximise the guiding function of instructors and actively mentor students to help them build good study habits and approaches as well as a sound personality. According to Liu et al.'s research, college students who suggest online English learning find that the more their peers use online learning or the more their teachers and friends encourage them to use the online ELT platform, the more likely they are to stick with it [7], [8].Traditional classroom English instruction can no longer keep up with the ever-increasing demands of English learning. The online English learning system offers a wealth of frequently updated resources, overcomes geographical and temporal constraints, and gives students and teachers access to an online learning platform for in-class or outside-of-class learning. It is necessary to effectively control the goal of college students' English online learning in the mixed learning environment in order to effectively control the participation in online learning in order to improve the impact of university English teachers' practical knowledge construction in online learning. There are two key prerequisites for the development of teachers' practical knowledge because it "emphasises the overall perception, understanding, grasp, and processing of teaching situations by teachers in teaching activities." First, there are issues with some instructional circumstances. Second, there is rebuilding via action-based reflection and subsequent formation of new beliefs. The process of problem-solving reflects the practical expertise of the teacher, and the context in which it is formed is inextricably linked to the particular circumstances of teaching and learning. Teachers have a certain style of thinking, acting, and teaching since they are professionals. This sort of ability information can only be used and developed when the schooling issue has to be handled immediately. The basic elements of this practical knowledge are embodied in reflection in action. Teachers have faced unheard-of difficulties as compared to the typical offline classroom setting. Because they ignore these online learning platforms and do not visit the library to obtain educational resources, some instructors have slipped far behind the times. To guarantee the growth of online instruction, a hybrid learning oral English learning platform must be built. Numerous network platforms exist. The right teaching platform may help combine materials and direct instructors' and students' attention to the learning process.

The functions and materials made available by the online learning platform must be chosen and used by university English lecturers in order to fully exploit the benefits of the online learning environment while also minimising its drawbacks. Blended learning allows students who struggle with learning to prepare prior to class, which helps them get over their fear of failure and learning obstacles. It also gives students who have a strong foundation and high standards for oral English learning more challenging and diverse course options to help them

meet their needs for ongoing improvement. Therefore, teaching about the relationship will become a difficulty, not to mention the teaching impact, if instructors don't adapt and grow, and continue to use outdated information and teaching techniques. Therefore, the future of learning will include adapting blended learning to college students' engagement in online English learning. To foster more exceptional college students, teachers must stay up with the trends and study quietly.

According to the notion of learning participation, students' time and effort involved in the learning process—which is made up of cognitive input, behavioural input, and emotional input—reflect their degree of time and energy invested in learning. The stronger the students' involvement in their education, the greater their learning impact and degree of growth, and the better the educational quality level of the higher education institution it represents. Since there are several network platforms available, choose the best one for English instruction may help integrate resources and direct instructors' and students' attention to the learning process. The "group file" is used to upload the lesson materials, and the "homework" feature is used to post assignments after class. Pictures, papers, movies, and many types of schoolwork may all be submitted by students. The "micro class" function is used effectively to thoroughly clarify typical difficulties. Interactive material is incorporated to the English online learning curriculum design in order to minimise the boredom brought on by instructors' single instruction throughout the teaching process. In order to strengthen students' capacity for divergent thought and to foster their initiative and excitement for learning, instructors first help them connect what is happening in real life outside of the classroom with what is being learned within. The dynamic aspects of the English online teaching method, which include orientation strategy, interaction strategy, monitoring strategy, evaluation strategy, and feedback strategy. Education administrators and front-line instructors at institutions of higher learning are paying more and more attention to the assessment of learning participation as it has grown to be a significant index for the measurement and evaluation of educational quality in these institutions. English online learning engagement in a blended learning environment refers to how often a student uses an online learning platform to participate in synchronous or asynchronous online courses. It covers both the students' independent study after class by signing on to the English online learning platform as well as their involvement in real-time when professors teach English online. The goal of the teaching approach is to intentionally monitor, assess, provide feedback to, and alter online teaching activities. It also aims to maximise the teaching process and more successfully accomplish the learning goals. As a result, the teaching technique at this point is not set in stone and adapts to changes in the learners, the teaching environment, the material being taught, and other variables. Teaching activities must be carried out in accordance with the current circumstances. It is also crucial to stress that at this point, the single teaching link may also comprise guiding, interactive, and monitoring strategies in addition to the teaching strategy of a teaching activity. Building a flip classroom and providing learning-difficulty students with preparation time prior to class will help them overcome their fear of challenges and learning difficulties; giving students with strong foundations and high English learning requirements more challenging and diverse courses to choose from will help them meet their requirements for continuous improvement.Multimedia resources, including words, images, videos, and audio, are employed in the online English education process, and a significant variety of interactive exercises, quizzes, thinking prompts, question-answering tasks, and other activities are integrated. The use of interactive design may actively assist students grasp, retain, and improve what they have learned by piquing their attention, providing timely feedback on the learning environment, attaining test objectives, and more. The completion of homework, sharing of accomplishments, and personal display are just a few examples of the many online English learning activities that reflect students' behavioral, emotional, and cognitive participation. These activities can accurately and accurately reflect students' level of personal development and the impact of their online English learning.

Utilizing Blended Learning in English Online Education:

After giving networked learning careful thought based on the aforementioned comprehension, the worldwide educational technology community introduced the notion of blended learning. A hybrid learning mode is a kind of instruction that seamlessly combines offline and online English learning materials, makes the most of information technology, encourages individual learning, and significantly enhances the effectiveness of instruction. Implementing blended English instruction should be done after understanding the discipline's teaching guidelines. Teachers are required to thoughtfully develop English online and offline activities, assist students in learning new information on their own, utilize offline activities to evaluate the outcomes of self-study, and support students in integrating new information and expanding their horizons. Online and in-person learning are combined to create blended learning. To achieve the best learning outcomes and financial gains, it is essential to adjust the effective blending of learning components, such as different English learning media, learning modes, learning environments, and learning content.

This includes developing scholars' master learning abilities, enhancing English learners' learning satisfaction, and optimizing the blending of learning resources. Online learning offers University English instructors a learning environment with significant independence, emphasizing their privileged position in the creation of practical knowledge. This independence will, however, limit the development of university English instructors' practical expertise if it is not utilized effectively. Online learning does not have the cohesive environment of a conventional classroom and separates learners from learners as well as educators from learners. University English instructors may find a platform for learning and communication via online learning. The expertise and practice of other instructors may help university English teachers expand their practical knowledge. It goes without saying that this kind of practical knowledge only refers to knowledge that can be comprehended and transmitted. Teachers still need to summaries some unconsciously acquired practical information via English teaching practise.However, blending two different learning approaches should not be the only goal of blended learning. Its main goal is to employ English resources in a way that is rational and scientific while maximizing the combination of learning materials based on the subject's features.

The study of blended English learning in the community of language learners is currently not organised enough. It has minimal guiding relevance for instructors to carry out blended teaching and mainly concentrates on the straightforward mixing of network and classroom English teaching modes. The integration of learning and English instruction in the classroom, teacher-student interaction, assessment and feedback based on educational technology, and student-centered and all-encompassing enhancement of students' English professional skill are all topics that have received little research. In order to meet the needs of the development of University English teachers' practical knowledge, the online learning environment of University English teachers is optimized with a focus on the online learning platform made up of the Internet and computer. After optimization, it is necessary that the online learning environment adhere to the cognitive law of University English teachers' practical knowledge. Combining the traditional face-to-face classroom teaching approach with the online autonomous learning approach, turning the classroom, and learning through online and offline not only highlight the central position of students through platform learning but also encourage their autonomy as learners. Different strands of English education should use blended English instruction. Teachers should create lesson plans for the preview phase, effectively support students in learning on their own, include information technology, and streamline the preview. Students may quickly access extracurricular learning materials and regularly hear the pronunciation of terminology thanks to modern information technology, but too many resources might make it easy to lose focus.

College English teachers who lack strong English professional knowledge and teaching ability will face double learning pressure brought on by practical knowledge, computer operation knowledge, and the openness of learning, that is, learning content, all of which require college English teachers to make independent decisions to prevent English teachers from becoming overwhelmed by the amount of links in the online learning platform. Self-regulated learning in the online learning environment and cooperative learning in a classroom environment combine and complement one another to create a brand-new learning method that can not only embody students' knowledge construction through English learning but also play the leading role of classroom learning teachers.

The lack of top-notch resources at nearby colleges may be compensated for by a rich network of resources.Students may access a variety of English teaching resources relevant to courses via the blended English online learning platform, including open classes at illustrious institutions, micro-classes, PPTs used in classroom instruction, supplemental materials, and connections to references. Combining traditional classroom teaching methods with the idea of a flipped classroom illustrates the collaborative multidimensional thinking that occurs both within and outside of the classroom, online and offline, with an equal focus on teaching and learning.

It combines the best elements of conventional teaching methods with contemporary educational technology, as well as the online platform's level of service and the user base's impact. Therefore, these four criteria should also be taken into account while developing improvement tactics to increase college students' desire to utilize English online education platforms.The internal reliability of the option questionnaire is examined in this empirical research using the reliability coefficient approach. The Cronbach coefficient method value is utilized as the standard by which to evaluate the degree of dependability. The monitoring findings are more constant and the data are more trustworthy when the coefficient is larger. Measurement items having a reliability value of higher than 0.7 are often considered to have strong stability in specialized study.

It displays the questionnaire data from this sample survey's reliability assessment findings.Each variable's Cronbach coefficient A value is larger than 0.7, demonstrating the stability of the data and the survey's high reliability. In the contemporary educational system, teacher-student contact is a crucial channel for communication between educators and learners and a key determinant of how smoothly instruction proceeds, particularly in the context of mixed learning. The interactions between instructors and students and those between students are the two levels of the teacher-student relationship. The inquiry is conducted to make sense of the existing circumstance and correct any shortcomings. This experiment primarily uses experimental analysis from three categories: I prefer getting feedback from teachers quickly; I prefer asking teachers questions directly in person; and I prefer asking teachers questions online. I then analyse complete nonconformity, partial conformity, and complete conformity66% of students said they prefer to ask inquiries online.

The statistics demonstrate that students prefer to contact with professors over the Internet while using the blended learning approach, which is consistent with the traits of the modern day. Only 12% of students disagree with the questions on which instructors prefer to provide quick feedback, suggesting that during teacher-student interactions, teachers should pay attention to providing students with timely feedback information and directing them to learn effectively and actively. The direction and inspiration for learners' learning comes from accurate feedback.The frequency of each online English teaching approach is counted throughout the teaching phase, and the frequency ratio information is then compiled from the frequency statistics. These frequency statistics allow for a more understandable calculation of the usage and characteristics of instructors' instructional tactics[9], [10].

CONCLUSION

University In order to accomplish the goal of successful word-of-mouth promotion, English online learning uses tangible incentives to motivate learners to share their online learning experiences with different social platforms on campus in a number of ways. This is another significant technique to harness community influence to support online learning among college students. This essay examines the present state and trajectory of English online learning among college students in a blended learning setting. More than 88% of students can finish their online learning tasks on time, according to the report. When there are 60 experiments, 42.97% of them are fully qualified to finish online learning assignments on time, 29.51% are partially qualified, and 21.94% did not meet the requirements to finish online learning assignments on time. Few students are passive in the online learning process, which values autonomy and engagement highly. It is evident that the majority of students approach online learning correctly, are aware of its advantages, and promptly complete its requirements. Hybrid learning evaluation can guide teachers to reasonably arrange teaching progress and arrangement, do a good job of teaching adjustment at any time, improve teaching level, and encourage the harmonious development of all learners by monitoring their dynamic learning process, exercising their autonomy, initiative, and innovation, mastering learning skills, and improving learning quality.

REFERENCES

[1] X. Fu, “An action research report on promoting learners’ motivation in college English intensive reading course in China,” *Theory Pract. Lang. Stud.*, 2014, doi: 10.4304/tpls.4.4.715-724.

[2] J. M. López-Zafra and S. de Paz-Cobo, “Twitter as a learning tool in higher education,” *Proc. 9th Int. Conf. Teach. Stat.*, 2014.

[3] J. H. Marks, “2003 ASHG AWARD FOR EXCELLENCE IN HUMAN GENETICS EDUCATION The Importance of Genetic Counseling,” *Am. J. Hum. Genet*, 2004.

[4] H. Y. Al-Kandari and F. A. Salih, “Adapting Antonak and Harth’s Mental Retardation Attitude Inventory for Kuwait’s Culture,” *Dig. Middle East Stud.*, 2008, doi: 10.1111/j.1949-3606.2008.tb00144.x.

[5] J. Wang, T. Wang, F. Wen, Y. Wang, and T. Zhang, “Study on Developing Research Skills of Undergraduate and Ministerial Key Laboratories Construction in Higher Education Institutions,” in *INTERNATIONAL CONFERENCE ON COMPLEX SCIENCE MANAGEMENT AND EDUCATION SCIENCE (CSMES 2013)*, 2013.

[6] T. M. Morrison, L. M. Angelone, A. Bestelmeyer, and J. E. Bischoff, “Innovations in modeling and simulation: Patient-centered healthcare,” *Ann. Biomed. Eng.*, 2016.

[7] L. Wang, C. Hu, and L. Shao, “The antimicrobial activity of nanoparticles: Present situation and prospects for the future,” *International Journal of Nanomedicine*. 2017. doi: 10.2147/IJN.S121956.

[8] H. Li, B. Chen, and G. Feng, “Investigation and Analysis on Present Situation of Existing Building Green Retrofitting in Public Institution,” in *Procedia Engineering*, 2017. doi: 10.1016/j.proeng.2017.10.366.

[9] A. Fujishima and X. Zhang, “Titanium dioxide photocatalysis: present situation and future approaches,” *Comptes Rendus Chimie*. 2006. doi: 10.1016/j.crci.2005.02.055.

[10] Y. Wu, “An empirical study on needs analysis of college business english course,” *Int. Educ. Stud.*, 2012, doi: 10.5539/ies.v5n2p216.

CHAPTER 10

ANALYZING EVALUATION MODEL FOR COLLEGE ENGLISH LANGUAGE IMPROVEMENT

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ABSTRACT:
College students may study English on their own via online learning, which is a significant method. It is impossible for students to have a more intuitive and thorough grasp of their English learning status with the summative assessment information offered by the prior online teaching platform, and there are no tailored guiding recommendations. In order to give students a more thorough analysis of the data, this paper combines data mining technology with machine learning to build an English diagnostic exercise model that can analyses students' learning status, the correlation between knowledge points and question types, and predict English achievement. The experimental results demonstrate that the evaluation model of college English diagnostic practice based on machine learning has high prediction performance, effectively analyses the association rules of knowledge points and question types, and has classification results of learning state with finer granularity. It may improve CET-4 by assisting students in properly comprehending their English learning state, offering them personalized analytical data and useful guidance ideas, and enhancing their English application skills.

KEYWORDS:

Association,Diagnostic, Summative, Vocational.

INTRODUCTION

China's improvements in English instruction after the reform and opening up are highly satisfying. Our teaching style and techniques still have significant issues and shortcomings, nevertheless. In particular, the development of higher vocational students' English application skills is not given adequate priority in China. There are issues like "unable to understand and speak clearly," and the kids' English proficiency is quite poor. The fundamental role of English as a tool for interpersonal communication cannot be properly performed due to a severe lack of application competence in everyday contact. Chinese higher vocational students are being taught English with a concentration on exam-oriented instruction. Students spend a lot of time learning vocabulary and grammatical rules, but get little practise in speaking and listening in English. It has evolved over time into "deaf English" and "dumb English." One of the fundamental requirements for many businesses to hire recent college graduates is English language and application skills. Another crucial test that college students must pass in order to graduate is the CET-4 and CET-6. The outcomes of CET-4 and CET-6 may serve as a good indicator of college students' knowledge of and proficiency in English as well as the quality and impact of their English instruction. The emphasis of college teaching differs from that of middle school instruction. After acquiring fundamental information and abilities, English instruction and examinations place greater emphasis on the thorough application ability, which is like a mountain in front of the door for students with weak English foundations. College students should priorities independent English study and practise during their free time. College students now have additional options for self-study because to the growth of online education and learning . Online teaching and learning techniques provide more options and resources than conventional college English

instruction[1], [2]. For individualized English practise needs, students may designate study time and topic based on their current circumstances . Additionally, online teaching instructors may do one-on-one or small-group instruction and have a reasonable amount of time to address and fix any issues or deviations in their students' English learning. E-learning places a lot of demands on students. Students must be able to properly outline their learning plans and topics, as well as their learning goals and present learning state. Although many e-learning platforms may provide English proficiency assessments to students, the whole e-learning framework process is fundamentally different from the conventional teaching style.Only the state of getting scores, response types for questions, and an analysis of question gains and losses are often discussed . As a result, students are only able to comprehend their own gains and losses in a certain sort of English question but are unable to master their own knowledge gaps, English language limitations, and a lack of focused and guiding data information. The use of big data technology and machine learning technology can be used to perform data mining on the vast amounts of information in an online English learning system, improve the analysis of the personalised information of English learners and the relevance information of question types, offer English diagnostic evaluation and guiding suggestions, decrease learning effect deviation, and improve learning efficiency and effect .The unique contribution of this research is to use a random forest model, association rules, and data mining to construct a diagnostic assessment model of English in an online English learning system. The model comprises modules for English performance prediction, English information correlation analysis, and student learning state assessment. Analysis of the relevant performance experiments, educational application comparison experiments, and experimental findings is done. The machine learning-based assessment model for college English diagnostic practise has excellent prediction performance, greater granularity in learning state classification findings, and effective association rule analysis of knowledge points and issue kinds. It may aid students in completely comprehending their English learning circumstances, provide personalized analytical data, practical advice, and ideas, enhance students' English application skills, and raise their college English proficiency[3], [4].

The process of education is cyclical. As the assessment criteria for the present teaching and learning impact, educators and students alike must acquire evaluation data throughout the teaching process. Phased and summative evaluations are used in education. Phased assessment functions as recommendations that may assist students in identifying and resolving issues as they learn, while summative evaluation assesses students' ultimate accomplishments and achievements. The two types of assessment for students' learning guidance vary from one another. Combining the two may provide students access to systematic assessment data and aid them in fully comprehending their individual learning circumstances. In order to help students create successful learning plans, diagnostic evaluations provide them learning status analysis, learning impact feedback, issue analysis, supervision, and early warning of their learning status People's beliefs and ways of learning have altered as a result of the growth of network education. Many students who are dissatisfied with the existing state of affairs continue to develop their skills and knowledge via network teaching, which also causes the network education platform to give the data information services offered to students more and more consideration. The network autonomous learning platform's diagnostic practise system has grown to dominate and be the center of attention in this field of study. In an effort to assess the learning state and skill level of various learners, several academics developed an adaptive learning system based on diagnostic assessment. Based on this, several researchers optimized the system and created a learning system that can suggest activities based on learners' current learning levels. Through tasks of the right difficulty, learners may more effectively demonstrate the learning impact.

To create a new teaching paradigm, several businesses have integrated the idea of diagnostic assessment into instruction. It has been discovered via the implementation experiment of the teaching model that students find it simpler to demonstrate the benefits and drawbacks of their learning and competence in this approach. Teachers provide pupils individually tailored advice based on their unique circumstances and work to address their weak points. To give college students with a diagnostic assessment, other researchers have examined the computer adaptive test method in light of their English language proficiency.Some researchers have explored the English learning system using mobile devices to overcome the constraints of learning circumstances and realizepersonalized learning in response to the varied growth of college students' demands for English assessment. Other academics have suggested that learning English is a long process and that most pupils do poorly with leapfrogging. As a result, they categories English reading according to various degrees of difficulty and provide reading materials with appropriate difficulty in accordance with the unique circumstances of pupils. The development of the study on an English learning system with a diagnostic assessment function is still in its early stages, and many functions are not being realized to their full potential. Further development is required for the targeted test paper generating module and personalized data analysis[5], [6].

DISCUSSION

Students are often simply assessed based on their test scores in the existing college English grading system. The completion of the curriculum and students' test scores are the primary metrics used to evaluate English instructors' instruction. This hinders the development of students' all-around skills and instructors' creative teaching strategies. In light of this situation, we should create a multifaceted college English diagnostic system, which is crucial for changing this unreliable and unjust teaching approach. Exams called CET-4 and CET-6 are used to assess college students' proficiency in English on a variety of fronts, with a focus on their fundamental language skills and all-around application potential. To put it another way, every college student has distinct issues with their English learning status, their degree of mastery of knowledge points, their level of exercise practise, and so on. However, different students have unique disparities in their learning capacity, comprehending ability, reading ability, and application ability. As a result, the evaluation strategy for college English diagnostic practise should provide focused, efficient, and varied English practise modes and counsel in line with the real circumstances of college students.

However, the early diagnostic evaluation system continues to use the conventional teaching evaluation mode and disregards the actual situation of college students. Students can also only receive limited guidance recommendations and information regarding learning evaluations, and the direction of learning improvement is unclear. In order to assist students, comprehend their real position based on analyzing the present learning capacity of college students, this article adds the assessment elements of students' learning status into the model. In order to forecast students' performance on college English examinations, the model additionally examines the relationship between English knowledge points and question categories. Focus on modifying students' English learning arrangements and paying attention to their unique circumstances in light of practise data and feedback information. Additionally, forecast and compare student performance, dynamically display student state changes, examine unfavorable variables, and accomplish monitoring and early warning goals. The block diagram of the machine learning-based diagnostic practise assessment model for college English.Block diagram for a machine learning-based diagnostic practise assessment mechanism for college English.The workflow of the model, as shown in the above diagram, primarily consists of four steps. The data pertaining to the examinations and exercises taken by college students in English must first be extracted, processed, analysed, and calculated. The second stage uses the students as the centre of the data information analysis, determines a

fairly accurate and overall assessment of the students' learning stability and test scores, and then delivers early warning messages to students whose learning stability is weak and whose overall learning process is sluggish. The third step involves using data correlation and pertinent algorithms to analyses the knowledge domains and question kinds of potential student issues, identify the students' weaknesses, and then help them practise and develop the necessary skills. Predicting the scores using past student practise exams and test results is the fourth step. Students may then comprehend thoroughly and intuitively how well they currently grasp.

The S-P table analysis approach will often be used to assess pupils' learning levels. The scores of English knowledge points and question kinds, as well as the categorization status assessment of students' attention coefficient, are the two-dimensional indicators for assessing students' learning status. Let the likelihood that a student receives a grade be and write, and the calculation of the attention coefficient be as shown in where the aggregate student score is, the total number of knowledge points received is, the average value of the knowledge points is, and the attention coefficient is.The number of knowledge point question types whose score rate is greater than the average, as well as all knowledge point question kinds, are represented by the mastery status of knowledge points and question types. This is determined by where students' mastery status is recorded.The S-P table analysis approach yields three assessment findings, although the evaluation granularity is rather fine. The categorization of pupils' status is a bit imprecise and harsh in practise. In light of this research refines the categorization of students' learning states. Five categories, each split into two examples, comprise the score results of the refined learning stage. When the pupils' learning state and attention coefficient stay constant at the present level, they fall into the first group of the level. When the students' learning environment is unstable but the attention coefficient is still at its present level, we fall into the second group. To improve assessment accuracy and personalization, the learning status of pupils might be separated into 10 stages in this fashion[7], [8].

Results of an Experimental Machine Learning-Based Diagnostic Practise Evaluation Model for College EnglishDeep learning and machine learning have some distinctions. First, there are several application scenario types. The conditions for commercialization have essentially been satisfied through the use of machine learning in sectors such as fingerprint identification, feature object detection, and others. Deep learning is primarily used in several sectors, including intelligent monitoring, facial recognition, semantic analysis, and word identification. It is now being quickly used in various fields, including intelligent hardware, education, and medicine. Second, even in situations when there is a limited quantity of data, machine learning can adapt to a range of data types. Because deep learning algorithms need a lot of data to be fully understood, their impact will be more noticeable if the quantity of data grows quickly. Different execution times apply. The training algorithm's execution time is the length of time needed. Deep learning algorithms often take a long time to train. This is because the algorithm has a lot of parameters, therefore training them takes longer than normal. Machine learning algorithms operate more quickly, in comparison.The use of the machine learning-based assessment model for college English diagnostic practise was intended to assess students' present English proficiency, provide focused and individualized advice to students, and raise students' English test results. As a result, this essay chooses two unified major courses from a university to compare how well they do in English. The first class is an experimental one, in which the model for this article is used to teach English. The second class is the control class, and both courses are CET-4 no assessed classes. The control class's English scores before to the experiment are comparable to those of the experimental class. To guarantee the stability and reliability of the comparison experiment, the performance of the three modules of the college English diagnostic practise assessment model based on machine learning is verified prior to the experiment.

Consider the typical exercises or homework assignments that students do as the training data, the teacher-organized exam as the verification data, and the final exam we take as the test data. The training data is exclusively utilised for training in these three modules' three data components, which are all existing data. Students' learning algorithms are designed to continually enhance performance on this subset of data. Verification data will be used by the instructor to track student learning and subsequently modify the teaching strategies. When the instructor believes the student can no longer progress, he or she administers a last performance exam on the pupil using test results to represent unknowable facts.

The average score rate of English knowledge points and question categories for all students taking part in the trial before the experiment is presented. The data findings demonstrate that the range of the experiment participants' score rates is very condensed, falling mostly between 30% and 59%. When students are categorised using the conventional S-P table analysis approach, the findings are too focused, making it difficult to further analyse the condition of the students' learning. The improved categorization table may more accurately categorise pupils and highlight the distinctions between various student groupings.Choose the T and F four analysis layers with the greatest confidence and support of association rules. The confidence degree of association rules shows the likelihood that item an also exists during the existence period of item b, whereas the support degree of association rules represents the likelihood that item a and item b exist simultaneously. This indicates that in T analysis, the likelihood is 41.89% when the three question kinds of information matching, quick reading, and reading comprehension all meet the average criterion at the same time. The chance of a reading comprehension score rate that is more than normal is 96.52% when neither of the first two question types falls below the average value. Further examination of the connection between information matching and reading comprehension reveals that there is a 46.85% chance that the scores for the two categories will both be above average at the same time. The likelihood of reading comprehension meeting this requirement is 96.04% when the information matching question type score is higher than or equal to the average.The first level of the F analysis examines the relationship between the listening questions for the short passage, lengthy conversation, and short dialogue. The likelihood that the three questions' scores fall below the average score threshold is 45.97%. The likelihood of brief conversation listening comprehension is similarly lower than the average norm, up to 99.57%, when the scores of the first two kinds of questions are likewise below average. The likelihood that the reading selection, word filling, and information matching scores in the second layer won't be able to satisfy the average standard simultaneously is 32.89%. The likelihood that the information matching scores won't be able to satisfy the requirement is 95.81% when the scores of the first two categories don't reach the average criterion. In conclusion, the question types belonging to the same category have a high internal relevance among the CET-4 and CET-6 question types. When students do poorly on certain categories of questions, there is a substantial likelihood that they will perform poorly on other categories of questions as well. Additionally, the relevance of the same type of questions is high, indicating that regardless of how the CET-4 and CET-6 question types are updated, students can become familiar with the changes of new questions by practising changing the former question types, which will also help them improve their English application ability.According to the aforementioned experimental findings, a machine learning-based evaluation model for college English diagnostic practise can more effectively realise the correlation analysis between knowledge points and question types and provide more accurate English performance prediction results for the comparative experiment. Prior to the experiment, that is, before class, and after the experiment, that is, at the conclusion of the semester, the experimental class and the control class will take the CET-4 exam. The college English diagnostic practise assessment model based on machine learning also forecasts the students' English test results prior to the second test, in addition to the zero CET-4 exam in the experimental class.

The results in the figure demonstrate that before the experiment, the English scores of the two classes were essentially equal, with the majority of them falling between 280 and 390. This demonstrates that the students in the two classes have weak CET-4 application abilities, and the majority of them still fall short of the passing standard. The results of the experimental class's students have significantly outperformed those of the control class's after the experiment, while the proportion of students with low scores has significantly decreased and the proportion of students with up-to-standard scores has also increased. The predicted score of the college English diagnostic practise evaluation model based on machine learning is closely correlated with the actual score of CET-4 in the experimental class, and there is a relatively large error between the actual score and the predicted score of only a few students. This demonstrates how the model can efficiently assist students in analysing their current English learning state, offer helpful suggestions and assistance for students based on the analysis data, improve students' weak English application ability, routinely practise various English question types, and swiftly increase students' learning efficiency and flexibility when faced with various question types. The prediction model's results closely matched the final outcomes, more accurately reflected the students' overall level and progress in learning English, encouraged them to identify any gaps in their knowledge and fill them in, helped them become more self-aware, and helped them reach their goal of improving their English proficiency[9], [10].

CONCLUSION

In order to analyse students' English learning status, knowledge mastery, problem type correlation, and English performance prediction, this study builds an English diagnostic exercise model by combining data mining, association rules, and random forest model. The experimental findings demonstrate the ability of the machine learning-based evaluation model of college English diagnosis practise to improve the classification of students' English learning status and highlight the disparities between different students' English learning status. The performance and accuracy of the machine learning-based college English diagnostic practise evaluation model's evaluation index are excellent. The outcomes of teaching comparison trials demonstrate that the approach can aid students in better understanding their overall English learning, better organising their learning schedules, and increasing their learning effectiveness. The problem kinds and knowledge points belonging to the same category have a high association, according to a correlation analysis, and the gain and loss points have a greater impact. The study realises the learning state early warning function and gives students intuitive feedback on their learning states through an accurate prediction of their English score. Additionally, the model's application performance is strong, and its diagnostic evaluation can accommodate the needs of the majority of students' autonomous learning, according to the evaluation results of the experimental class students using the model.

REFERENCES

[1] K. J. Kim *et al.*, “Six Strategies for E ff ective Learning,” *Handb. Self-Regulation Learn. Perform.*, .

[2] J.-N. Amadhila, “Factors that influence exclusive breastfeeding in Windhoek district in Namibia,” *J. Acad. Sci.*, 2017.

[3] Peraturan Pemerintah Republik Indoneisa, “Peraturan Pemerintah No. 16 Tahun 2005 Pengembangan Sistem Penyediaan Air Minum,” *Peratur. Pemerintah No. 16 Tahun 2005 Pengemb. Sist. Penyediaan Air Minum*, 2005.

[4] P. S. Oo *et al.*, "Australian Council for Educational Research The Leadership Challenge : Improving Learning in Schools (Conference Proceedings) Australian Council for Educational Research (ACER)," *J. Strateg. Manag.*, 2018.

[5] Nguyen B. Do, "MODELING OF FRICTIONAL CONTACT CONDITIONS IN STRUCTURES," *Glob. dan Kebidayaan Lokal Suatu Dialekt. Menuju Indones. Baru*, 2005.

[6] L. Marcotrigiano, "Elaboración Y Presentación a Los Estados Financieros," *Actual. Contab. FACES*, 2013.

[7] M. Ghaffari, "O papel do plano de comunicação preventivo em momento de crise na organização," *Glob. dan Kebidayaan Lokal Suatu Dialekt. Menuju Indones. Baru*, 2005.

[8] Nayyar, "CFD Analysis of Transonic Turbulent Cavity Flows," *Glob. dan Kebidayaan Lokal Suatu Dialekt. Menuju Indones. Baru*, 2005.

[9] L. Y. Barón Díaz, "CONFIABILIDAD Y VALIDEZ DE CONSTRUCTO DEL INSTRUMENTO 'HABILIDAD DE CUIDADO DE CUIDADORES FAMILIARES DE PERSONAS QUE VIVEN UNA SITUACIÓN DE ENFERMEDAD CRÓNICA,'" *Intelligence*, 2010.

[10] İ. Arısoy, "Wagner ve Keynes Hipotezleri Çerçevesinde Türkiye'de Kamu Harcamaları ve Ekomomik Büyüme İlişkisi," *Çukurova Üniversitesi Sos. Bilim. Enstitüsü Derg.*, 2005.

CHAPTER 11

EVALUATING COLLEGE ENGLISH TEACHING AND LEARNING APPROACH

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ABSTRACT:
At response to the demands of social and economic development, the concept of abilities at colleges and universities is undergoing a significant transformation, and the curricular perspective that goes along with it is changing as well. College and university students who do not major in English are vital to the advancement of foreign language learning, the quality of foreign languages, and the development of language proficiency in practical contexts. As a result, evaluating how well English is taught in a college is one of the most crucial ways to evaluate the curriculum's quality. As a result, evaluating college English training has become a top priority. This study provides a neural network based on the BP network's application principle for assessing collegiate English instruction. Here is the primary piece of work: Using the ant colony algorithm's global optimization capability, the weights and thresholds of the BP network are tweaked based on the unique characteristics of the assessment of college English instruction. By integrating global and local approaches, an update of the pheromone is achieved to enhance the ability of ACO to optimize. A function is introduced to the global update pheromone formula to change the information residual coefficient in accordance with the solution distribution. According to the method of the minimum error judgement, the residual coefficient of the local pheromone is modified.

KEYWORDS:

Curriculum, Economic, Globalization, Internationalization.

INTRODUCTION

Globalization of the economy and the internationalization of science and technology are traits of the new era. The exchange of resources and education takes place mostly in English, as does international political communication and trade, as well as the global dissemination of technology and information. The need for people who are proficient in many languages and skilled at interacting across cultural boundaries has increased along with the importance of English as a tool for improving one's global competitiveness. The study of foreign languages is currently required at all educational levels and is frequently seen as a crucial element of a comprehensive civic education. College English is crucial for non-English majors because it raises the standard of their education, broadens their horizons, and develops their special talents. Given the intimate relationship between the development of practical job skills and talent, its quality is a crucial factor in assessing the effectiveness of college curriculum designs. As a result, research on teaching English at colleges has proliferated recently.The goal of college English instruction has gradually shifted from the former emphasis on reading and writing skills to developing college students' broad English application abilities, from exam-oriented education to quality education. Students' ability to communicate in English is directly impacted by how well English is taught in college English classrooms[1], [2]. It is important to remember that improving and ensuring the quality of education is a concern shared by parents, colleges, and society as a whole. Building a somewhat flawless teaching quality assurance system based on an understanding of the connotation and new requirements of college English teaching has significant theoretical and practical implications in the current emphasis on quality education.The teaching results are subpar despite the fact that the state

and pupils have both made great efforts. Even when students' reading abilities have improved, many still experience difficulties with their improved speaking and listening abilities. The English proficiency of recent college graduates, especially their capacity to use English, will not be sufficient to meet the demands of the new century on national scientific, technological, and economic development. This problem is a result of a number of causes, including a lack of timely curriculum revisions, a slow examination procedure brought on by the national uniform examination, an unhealthy social environment, and an uncoordinated educational system. Each phase of a university education has its own, ineffectively interconnected system for teaching English. One of the most crucial problems is the absence of a rational, scientific evaluation index system and methodology for classroom instruction quality. College English instruction's quality has long been determined purely by students' test results rather than the efficiency of the teaching method. By relying solely on the results of the CET-4 and CET-6 college English tests to assess the effectiveness of instructors' instruction, negative direction and disincentives for English instruction are offered.It is essential that college English instructors regularly assess their lessons. It can be used by teachers to improve classroom management, get feedback on their lessons, and guarantee the caliber of their instruction. This tactic can enhance the efficiency, methods, and learning processes of students. Future teaching evaluations will combine teaching summative evaluation with process evaluation rather than relying solely on the fourth and sixth grade exams. Evaluation of classroom teaching quality, a crucial component of the process, is the key to determining the overall caliber of English education at the college level. Its main objective is to offer a thorough, organized, credible, and scientific evaluation procedure for the inescapably necessary enhancement of college English classroom instruction.

Research suggests that colleges and universities should actively promote the integration of information technology and the teaching of college English curriculum, with information technology continuing to play a key role in current educational technology, particularly information technology for foreign language teaching. Referencing, which addresses the objectives and duties of college English education from the perspective of cross-cultural communication, describes the three-way interaction between language, culture, and communication. Eight approaches of teaching foreign languages were methodically introduced in literature, including the cognitive method, the conscious practise method, and the hearing and speaking method. Teaching quality management has a strong meaning in literature. For instance, a study published at the beginning of the twenty-first century primarily outlines how to achieve the objective of English education that can utilize English. The literature pointed out the country's English education standards and direction, even though it did not specify the precise procedures for the quality assurance of English education. This helps to advance the investigation of the quality management system for English education[3], [4].

According to literature schools should constantly work to raise the quality of their instruction. They should do this by putting in place a system for managing the quality of their instruction that is governed by quality management system standards. According to literature, colleges and universities can benefit greatly from using the quality management system that is frequently used by businesses as a reference, and higher education can benefit greatly from the knowledge contained in the quality management system standards. The quality management system standard is a perfect benchmark to gauge teaching quality until a more precise one is discovered. According to literature, quality management system standards have a guiding relevance, and management based on classroom instruction is a quick way to increase quality. According to the literature, establishing an efficient teaching quality management system is the primary goal of adopting quality management system standards in higher education institutions. Reference addressed the methodical approach to its application in the teaching quality system and introduced the quality management system standard to

colleges and universities. The quality management system standard was successfully incorporated into internal management, according to the literature. According to literature that examines undergraduate teaching quality, higher education associations, local nongovernmental organizations, government organizations, foundations, and foundations themselves should all be evaluated. Internal evaluations are another option, and the outcomes of these evaluations are related to professional certification, teaching excellence, and certification for schools. Through the certification of social professional institutions, the internal evaluation of schools, and the evaluation of the three parties under the government's supervision, literature has developed a pretty sound quality management system operation mode. Reference adopts a framework for monitoring and evaluating higher education quality that integrates internal and external factors. One of these, internal quality control, relates to internal monitoring and evaluation of the quality of the instruction done by the institutions themselves. In order to establish a scientific quality management system, it primarily entails the overall self-assessment of the school, the self-assessment of disciplines and majors, the establishment of two-level teaching quality monitoring institutions at the school and the college, and the employment of off-campus personnel as supervisors. The academic assessment, which is primarily in charge of reviewing the formation of academic standards, the acquisition of academic resources, and the management of the overall teaching quality of the institution, is what the literature described as the external evaluation system. Literature has looked at the situations in manufacturing and higher education, outlined their parallels and contrasts, and highlighted any potential challenges TQM implementation in higher education may present.

DISCUSSION

The BP algorithm is used in this study to assess collegiate English instruction, and the improved ACO algorithm is used to enhance it and create an IACO-BP network to address the BP method's drawbacks.The NNs have a multilayer network structure and are made up of a lot of interconnected neurons. The network structure's real-time parameter adjustments allow it to analyse a wide range of complicated and dynamic information. The most prevalent network in the system is BP, which has a significant classification advantage because to its excellent self-learning, mapping, correction, and generalisation capabilities. As a result, it has a broad range of applications.The input layer is used to receive inputs, the hidden layer is used to process those signals, and the output layer is used to convey results. BP typically consists of these three distinct network configurations. The input layer of the network receives no processing. Processing data is carried out by at least one hidden layer. As a consequence, integrating and disseminating findings from the hidden layer fall predominantly within the purview of the output layer[5], [6].

The BP network method's forward propagation and error reverse propagation phases are split into two separate phases to start. Information propagates forward in a forward propagation process from an input layer to an output layer using weights and thresholds. Only if the error between your actual output and your predicted output is within the permitted range can you go on to backpropagation. During the error backpropagation process, the weights and thresholds of each layer of neuron connections are altered one at a time in accordance with the error signal. Up until an end condition is met, a backpropagation loop is iterated.The forward propagation approach describes the step-by-step forward sequence of BP processing of the input. The weighted sums of all nodes' outputs from preceding layers make up the hidden layer inputs. The data from the hidden layer is mostly combined in the output layer in order to produce the final result and broadcast it to the outside world. The output of each node is as follows if its function is linear:By layer-by-layer transmission of the mistake in the reverse direction and gradient descent algorithm-based weight and coefficient adjustments, the backpropagation process helps to reduce and rectify model error.

Next, using the gradient descent process, reverse derivation is used to arrive at the weight adjustment formula:The layers' weights are changed frequently until the error falls within the network's original tolerance range.Although BP excels in the areas of fault tolerance, self-adaptation, and data parallel processing, it also has significant relevance in the area of data categorization. The network model, however, not only needs a lengthy training period but also has a tendency to slip into local convergence when BP interacts with certain more complicated nonlinear issues because of its complex network structure and many parameters. Because of the shortcomings of the conventional BP model, researchers have enhanced and improved the BPNN model in many ways. The following are a few common optimisation and improvement techniques: initially, the inertia term is introduced. The adjustment formula of the connection weight coefficient includes an inertia factor to quicken convergence. Add a phrase for momentum next. Prevent the model from locally varying and assuming the local ideal position throughout the training phase. To increase the capacity of the model to achieve global convergence, a momentum component that can lower local oscillations is introduced to the model coefficients. Third, alter the step size dynamically. The step size is dynamically changed based on the training characteristics of the model's various phases. Combine clever optimisation methods, in step four. To accomplish parameter optimisation and hasten global convergence, certain clever optimisation methods are applied to optimise a large number of weight coefficients in the model. The widely used approach to enhance the performance of NNs models is now weight coefficient optimisation. This Chapter also addresses current research areas, beginning with BP and intelligent optimisation algorithms, attempting to combine the strengths of the two to create a high-performance classification model that is then used to assess college English instruction[7], [8].

ACO is used to identify the best paths using a probabilistic approach, taking its cue from how ants hunt for food. The performance of the BP technique may be enhanced by the ACO algorithm by successfully enhancing the initial selection of network weights and thresholds.Each ant searches for its food by producing a pheromone along the way, even though it has no idea where it is. The distance travelled by the ants may not first seem to be the shortest, but as pheromones volatilize and leave behind residue, their concentration varies over time along each route. The quickest route will be discovered after shortening the ants' journey appropriately. If ants are pathfinding and come upon a route they have never travelled before, they will randomly choose and discharge pheromones. Ants living in the same colony can detect the presence of their pheromone, and for young ants, the choice of route depends on the pheromone concentration. The road with a greater chance of being chosen often has a higher pheromone concentration, and this path may be thought of as being shorter. More ants eventually gravitated towards the shorter pathways, which also had greater pheromone concentrations. Finally, the ant colony's offspring all choose the route with the maximum pheromone concentration, which is also the shortest route. The ants use this method to determine which of the several routes leading from the nest to the food is the shortest. Ants choose a path based on the pheromone concentration along the route, and after the way has been chosen, the pheromone concentration along the route is updated. Ant colony algorithm, a model of evolution, is appropriate for BP algorithm parameter optimization.The main ACO stages may be broken down into the following steps. Initializing the parameters is the first step. Set the heuristic factor, the maximum number of iterations, the distance between nodes, and initialise each route pheromone. The creation of a forbidden table is the next stage. Ants are randomly put on the nodes, the taboo table of ants is initialized, and the associated values are appended. Create a solution is the third stage. The ants follow the state transition probability criterion to choose the next route by moving from the current node to other nodes. Each ant creates a route solution after searching for pathways based on the likelihood of a state change. The forbidden table has to be updated as the fourth stage. The new node is added to the forbidden list each time the ant chooses a node. Finding out whether the ant colony has finished pathfinding is the fifth stage. If every ant has finished pathfinding

and building the solution, go on to step six; if not, go back to step three and keep building the solution. The worldwide update of the pheromone is the sixth phase. Update the pheromone with the routes taken by all ants in the current cycle. The judgement concludes with the seventh phase. If not, increase the number of repetitions and go on to step 2 to begin the next iteration. Termination criteria might establish a lower constraint on the length of the shortest route or indicate the number of evolution iterations.

Since the ant colony algorithm's inception, many academics have taken notice. It differs from other optimisation algorithms in that it is simple to integrate with other algorithms, has distributed computing, and excellent resilience. The ant colony algorithm has been utilised in several instances in combination with other search methods, demonstrating the algorithm's potent and versatile search capabilities. In order to find the best set of solutions for the combinatorial optimisation issue, all nodes must be traversed in accordance with their internal relationships once their internal relationships have been established. Even while the ant colony method can handle a wide range of complicated problems in research, there are still certain shortcomings. The search duration will increase and the quality of the answer will deteriorate when parameters are specified wrong. Second, when compared to other optimisation techniques, the ant colony algorithm's complexity is extremely high. Additionally, pheromone accumulation makes it simpler to stagnate and enter a local optimum. This study will use the following three optimisation techniques due of the general ant colony method's slow convergence time and ease of entering the local optimum.IPP's route finding probability concept has been improved. Ants can choose an interval based on the principles of high concentration and high probability because the ant optimisation probability formula adopts the pseudorandom ratio selection instruction, which controls the relative importance of optimisation and the exploration of new intervals. The likelihood that a node chooses the interval number where it is positioned has the following formula, according to this theory:The parameter in the aforementioned ant pathfinding procedure is a random number randomly chosen from the range and defines the likelihood of the interval of the node where the optimum solution is situated. Different probability choices may be chosen for various values, ensuring the solution space's variety.Enhancements to the IGUP's global update pheromone approach. Interval information is the basic foundation for ant pathfinding. It is simple to enter a local optimum condition when information on the road with more information keeps growing while the other pathways with less information keep becoming smaller or even vanish as a result of residual variables. The global adaptive updating pheromone technique is used in this research to enhance the global convergence ability and search ability for the ant colony algorithm. It differs from the conventional ACO in the following ways for the selection of appropriate weights and thresholds. It is established which residual factor the general ACO uses to update pheromone globally. The MMAS pheromone update serves as the foundation for the ant colony algorithm. The approach enhances the likelihood of reaching the ideal solution by adding an exponential function based on a natural constant to adjust the pheromone residual factor. In doing so, the pheromone in the interval is updated worldwide. In this approach, after one iteration of the ant colony, the pheromone in every interval is updated globally, and the residual factor's value is modified using the maximum and lowest value ranges of the pheromone in MMAS. In accordance with the range of pheromone values in MMAS, the global adaptive approach will modify the size of the pheromone in the subsequent time period.

The information residual factor varies considerably under the impact of the function if the present pheromone concentration is more than the maximum pheromone concentration or less than the lowest pheromone concentration. This prevents the pheromone in the interval from vanishing or becoming too high, which would cause the algorithm to reach a local optimum. In this manner, each interval's pheromone concentration is changed globally adaptively in accordance with the solution distribution.Improvements to local update pheromones used to

build ILUP: During the ant pathfinding process, the algorithm chooses the interval in which the node is located based on probability. As a result, the probability of being selected in the interval with high pheromone concentration will rise, which may cause the concentration of this interval to reach the current maximum. In this manner, the solution elements chosen by the progeny ants will continuously be chosen in the period while they are present. Because the ant colony is still stationary and unable to further explore the area, it is unable to find the best solution. The pheromone in the to-be-selected interval is locally modified throughout the ant colony optimization process in order to avoid this problem. In this approach, it is possible to minimize the likelihood of being picked in the region of maximum pheromone concentration, which corresponds to a comparatively lower concentration of pheromone in that range.

Based on the aforementioned concept, it is determined if the present sample will fall into the local optimum solution by comparing its error to the algorithm's smallest error during the period of highest pheromone concentration. Assuming that the ants are in the node selection interval and that the pheromone in the interval has been locally updated:The ant colony method is changed using the following formula if it exceeds the minimal error since it is simple to enter the local optimum. The settings won't change in any other case.If the interval with the highest pheromone concentration is repeatedly chosen after updating the pheromone residual factor in the formula above, the pheromone residual coefficient of the current interval will be decreased or even reduced to a minimum value, decreasing the pheromone concentration in the interval. Then, the pheromone in the interval of greatest pheromone concentration is updated locally, which may encourage more ants to seek the area. By doing this, the solution space's variety is successfully increased while stagnation is prevented. The ACO algorithm's capacity to avoid entering a local optimum and increase its global search capability may both be achieved when combined with the better approach of global and local adaptive updating of pheromone. IACO is the name for the ant colony algorithm that was developed using the above-mentioned improved method.The improved ant colony algorithm optimization algorithm may be acquired according to the notion of optimizing the parameters of the BP algorithm using the IACO algorithm. The IACO-BP method optimizes the initial weight and threshold values using the improved ant colony algorithm before looking for a collection of the best options. The BP algorithm then executes learning and training under the influence of the optimum value, which may guarantee that the weights and thresholds are maintained within a range of values as narrow as feasible. This overcomes the method's flaw that it is simple to enter the local minimum and speeds up algorithm convergence[9], [10].

CONCLUSION

As higher education reform and enrollment growth continue to increase, the value of teaching has grown. It will take a lot of effort and money to create a reliable system for assessing and monitoring the quality of college English education. It is influenced by the quality assurance system for college English education since there are many interconnected teaching strategies and elements. To grow talents with excellent English language application skill and comprehensive quality and level for the society and the market, it is necessary to regulate these key connections and influencing elements, which can only be done via an ideal system of instruction quality assurance. This paper develops a NNs-based technique for assessing the quality of English education in light of this. Due to the BP method's propensity to settle into the local optimum, the selection of weights and thresholds is optimized using the ant colony algorithm's global search capability. The idea of optimization based on the parameters needed by the network is described by the ant colony algorithm node.An IACO algorithm is suggested in order to address the drawbacks of ACO. It is decided to use both local and global update pheromones. To account for pheromones, an exponential function is introduced to the global update calculation. In the local update approach, the network error judgement

serves as the foundation for adjusting the remaining pheromone components in order to accomplish the local updating of pheromone goals.The BP algorithm is improved using the IACO, and the improved BP algorithm is then used to assess the quality of college English instruction. Systematic tests have confirmed the accuracy and validity of this work.

REFERENCES

[1] C. K. Gately, L. R. Hutyra, I. S. Wing, and M. N. Brondfield, "Introduction to Neural Networks Using Matlab 6.0," *Environ. Sci. Technol.*, 2013.

[2] S. Wardoyo, W. Kuntari, A. S. Pramudyo, Suhendar, and S. Hidayat, "The development of javanese language teaching materials through introduction of java scripts using artificial neural network," *Telkomnika (Telecommunication Comput. Electron. Control.*, 2018, doi: 10.12928/TELKOMNIKA.v16i4.8465.

[3] F. Günther and S. Fritsch, "Neuralnet: Training of neural networks," *R J.*, 2010, doi: 10.32614/rj-2010-006.

[4] T. Okatani, "On Deep Learning," *J. Robot. Soc. Japan*, , doi: 10.7210/jrsj.33.92.

[5] T. G. Clarkson, "Introduction to neural networks," *Neural Netw. World*, 1996, doi: 10.1201/9781482277180-13.

[6] Z. Wang, Z. Liu, and C. Zheng, "Introduction to neural networks," *Studies in Systems, Decision and Control*. 2016. doi: 10.1007/978-3-662-47484-6_1.

[7] N. Yadav, A. Yadav, and M. Kumar, "An Introduction to Neural Network Methods for Differential Equations," *SpringerBriefs Appl. Sci. Technol.*, .

[8] F. Ponulak and A. Kasiński, "Introduction to spiking neural networks: Information processing, learning and applications," *Acta Neurobiol. Exp. (Wars).*, 2011.

[9] Y. Huang and S. Wänstedt, "The introduction of neural network system and its applications in rock engineering," *Eng. Geol.*, 1998, doi: 10.1016/S0013-7952(97)00056-2.

[10] A. Krenker, J. Bester, and A. Kos, "Introduction to the Artificial Neural Networks," in *Artificial Neural Networks - Methodological Advances and Biomedical Applications*, 2011. doi: 10.5772/15751.

CHAPTER 12

DEVELOPMENT OF BLENDED COLLEGE ENGLISH INSTRUCTION IN A MOBILE NETWORK ENVIRONMENT

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ABSTRACT:
A new kind of mobile learning mode has arisen as a result of the fast expansion of economic globalization. Cell phones and laptops are now an essential part of life for modern college students, and they are seen as an essential tool for mobile learning in the second classroom. College English professors like the blended teaching approach that relies on the mobile network environment as part of the education reform and "Internet +" integration process. Additionally, English professors completely combine the conventional classroom with online courses using the flipped classroom approach in order to enhance the quality of English instruction. With this structure, a thorough, varied assessment and evaluation system is efficiently developed. In order to give benchmarks for relevant researchers, the study specifically examines and explores the flipped classroom hybrid teaching method in four areas, beginning with the present state of college English instruction. In light of the aforementioned traits and benefits, this article analyses the need and viability of using mobile learning in the second classroom where college English is taught. In the meanwhile, the application mode of certain devices is taken into consideration for better learning.

KEYWORDS:

Blended College, English Instruction, Economic, Globalization.

INTRODUCTION

Mobile learning, commonly referred to as M-learning, is a brand-new approach to education that has drawn significant interest from all over the globe. It is very popular in second-class settings. Students may study in a variety of ways whenever and whenever they choose with the help of mobile learning, a learning approach based on mobile terminals and computer technology. These days, several nations have experimented with this kind of instruction, and interest in learning English is growing. The use of mobile teaching in the second classroom is crucial since China is increasingly focusing on English instruction for college students.As domestic businesses gradually leave the country, they propose higher standards for talent cultivation in universities and colleges, and good English literacy is an important component of the higher standards. English teaching is an important channel for providing skilled talents for national development. University students, however, have a harder time learning English than undergraduate students do. The phenomena of "dumb English" is widespread, and university students' English learning is characterized by a weak foundation, a bad learning attitude, a lack of enthusiasm in learning, and inadequate learning aptitude. Despite having studied the language for six years before to joining a university, the learning outcome is not particularly excellent [1], [2]. It is urgent to reform English teaching in universities because some of the traditional "duck and fill" teaching methods are out of date with modern times and student needs, some English classroom teaching strategies and methods are still ineffective once students enter universities, and the evaluation system is comparatively simple. University students, on the other hand, are open to new ideas, engage in mobile Internet, and heavily depend on smartphones. University professors are actively looking for ways to improve the quality of English instruction in response to these circumstances. With

the rise of information-based learning and the widespread use of smartphones, blended learning based on mobile network environments is one of the more successful approaches.Online instruction has no time, space, topic, or form restrictions, in contrast to conventional offline instruction. Teachers may thus combine student preferences for utilising mobile Internet with knowledge of how other companies have used mobile Internet to attract clients to create online teaching strategies that adhere to university students' learning standards. For instance, instructors may employ teaching materials in the form of web videos, Word documents, PowerPoint presentations, etc. for online instruction to establish a high-quality hybrid teaching mode. For instance, instructors might create English learning interest groups with the use of self-media channels like WeChat based on students' preferred mobile Internet themes, such as microblogging topics, to integrate English into students' online life. Overall, a thorough examination of the function of mobile Internet in English instruction is required in order to foster students' English literacy. Mobile Internet may be utilised to fix a variety of issues with conventional instruction and raise the quality of instruction.The poor English proficiency of college students has long been a challenging area of instruction and a significant barrier to English instructors' efforts to raise the level of instruction. Due to the time and energy constraints on instructors in the offline classroom, only standard teaching materials can be created, and varied teaching strategies are more challenging to put into practise. Through the collaboration of online and traditional classrooms, instructors may effectively construct lesson plans and implement differentiated instruction in the flipped classroom hybrid teaching style[3], [4].

In their actual classrooms, English instructors should organise the most fundamental as well as moderately challenging English knowledge and fully use the convenience of online courses. For instance, publish the learning goals and assignments in advance as Word files to the English QQ group for the class or to an online learning platform. Then, in order to enhance the calibre and effectiveness of students' self-study prior to class, we create microlesson videos of various sorts and degrees of difficulty for them to choose in accordance with their learning goals and personal learning capacity. Another example is the need of two movies for the instruction of Chapter grammatical points. The second video is quicker and concentrates on knowledge expansion and practical application, making it appropriate for students with strong learning abilities. The first video is longer, richer in content, and the teacher's explanation process is detailed, making it suitable for students with poor understanding. English instructors may concentrate on creating challenging and significant teaching activities as well as hands-on activities for the offline course to enhance students' ability to study on their own and encourage the growth of their practical abilities. Online courses should typically provide basic and somewhat challenging material, but offline courses should emphasise practical exercises and challenging material. The design and production of the online films must include English instructors in order to fully capitalise on the benefits of the flipped classroom, boost student performance, and establish a solid basis for the offline classroom.

Overview of Mobile Learning Models Based on SmartphonesMobile computing devices primarily assist the smartphone-based mobile learning mode by playing dynamic knowledge material. It may serve as a productive medium for communication between students and university English teaching professionals. Currently, the 4G network environment is where the majority of information interaction for the smartphone-based mobile learning mode takes place. This includes interactive SMS-based learning mode, regional wireless network-based learning mode, and WAP website-based learning mode. The mobile learning mode based on local wireless networks has emerged as the primary supplementary learning mode in college English instruction as a result of the rising use of smartphones. The fact that the learning environment is mobile makes the smartphone-based mobile learning mode distinctive. Students from a variety of majors may overcome the space restriction in the mobile learning

environment and choose the courses and lecturers who most appeal to them. This will increase their enthusiasm in acquiring English skills and theoretical knowledge and ensure the effectiveness of English instruction[5], [6].Short message sending and receiving, audio and video communications, email sending and receiving, and other features are all available on smartphones. Students in high school may alter the course material to fit their needs. In order to guarantee that learning confusion is effectively resolved and to enhance the quality of instruction, they may also communicate with class participants and the teaching staff.Teachers of English may incorporate theoretical concept knowledge into 3D learning scenarios using the smartphone-based mobile learning mode to lessen the impact of real-world circumstances on the learning environment.

DISCUSSION

The social cognitive learning theory states that learning encompasses the whole process of knowledge acquisition and learner engagement with information. In addition, learning may be seen as a learner-led process in which pupils create their own knowledge system, according to the free learning hypothesis. A secondary factor in determining the efficiency and calibre of learning in this process is the teaching staff, which also serves as the primary supplier of the environment or teaching circumstances. The primary predictor of the learning impact is the learner's propensity for independent learning. College students may explore their English knowledge, develop their English abilities, and become conscious of English learning via the smartphone-based mobile learning method. Excellent characteristics include individual choice, extensive interactivity, contextual relevance, and ease in the smartphone-based mobile learning mode. It offers a strong foundation for the development of contemporary English curricula in colleges and universities.Given the wide variety of touch-screen smartphone brands and operating systems, we created corresponding applications for several popular operating systems before designing and producing a WAP website for smartphone operating habits , which users of the remaining cell phone systems can easily access using mobile browsers like UC. This may completely resolve the issue of using multiple brand mobile phones to access the system. The system primarily has a variety of user categories, including visitors, students, instructors, and so on. The following are the precise functions. Browse news alerts: After visiting the website, users may browse news alerts or search for news alerts using keywords. Downloadable public materials are available on the resource download website, where users may browse them and do keyword searches. Visitors may search for professors by college and particular details about the courses they are enrolled inPersonal information management: After signing in, students may access and edit their personal information and account password. After signing in, students may access the student course administration section, where they can examine class information by week and course name, as well as test schedules and final grades for specific courses.

Management of course resources: Students may go through and download posted course materials and teacher-provided review materials. Management of course assignments: Students may access the details of this course's assignments on their mobile devices. Students may examine questions from other course participants and the teacher's replies, as well as amend or remove any of their own questions that the instructor has not yet responded to.

Personal data management: After signing in, instructors may access and edit their personal data and passwords for their accounts. Teacher course management: After signing in, instructors may examine the class information for their courses, broken down by week and course name, as well as the test schedule for a specific course, a list of the students enrolled in it, and the students' final grades. Management of course students: professors may see a list of students who are accessible by course and view individual student information by student number.

Management of course resources: Teachers have access to post, browse, remove, and download both class and review materials. administration of course assignments: Teachers may browse and examine the details of their assignments by course on a mobile device. They may also publish, edit, and remove assignments from the administration side. Management of questions and answers in a course: Teachers have access to students' questions and their own answers, and they may react, edit answers, remove questions, and carry out other actions[7], [8].To implement the teaching information service system for cell phone clients, which includes functions for public resource information based on common users, teaching information management based on teachers, and teaching information service based on students, etc., the system adopts SSH architecture based on the MVC model. The system's overarching framework architecture is the subject of our next discussion. Its general architecture is seen below. The firewall specifically divides the intranet from the extranet. The system is less likely to be attacked in this scenario, making it safer for the application servers. Virtual private network access is an excellent option for system administrators who wish to control the system from a remote network, but it should be made clear that only certain users have access to this capability.We'll go into more detail regarding the diagram up there. As we can see from the diagram above, we utilize the enterprise level for the gateway, and with respect to its characteristics, we have the following in particular.

The gateway protocol we use to administer the device with the aid of H3C Scenter is SNMP/TR-069 network management protocol. It can handle standard SNMPv3 and is compatible with SNMP v2c. It also supports NTP synchronization and remote setup through Web.With the aid of a VPN, we may improve IPS services, guard against viruses, audit and manage user behaviour, and upgrade services via feature libraries for URL filtering. We'll go into more depth about the graphic above below. The web client, or more particularly, a view, is first seen at the top of the design. Its function is to provide the user the relevant business logic and data. The data are sent to the server at the same time. The client's requests are then assigned operations by the Servlet layer, which is the next layer, before being handled by the relevant programme. With the aid of logs and transaction files, we can also keep an eye on the system. The DAO layer may carry out persistent activities with the aid of Hibernate, after which it can take control of the DBMS.This study used a questionnaire survey, mathematical statistics, and an experimental investigation technique to examine the impact of utilising a mobile learning mode based on a smartphone, with students from our school serving as the research subject.

100 students from the class of 2017 were used as research subjects for the particular experimental process. The subjects were randomly assigned to two groups, and the experimental group students used a mobile teaching method based on smartphones, while the control group students used the traditional lecture, demonstration, and model practise. Finally, SPSS18.0 was used to statistically analyse the data.According to early statistical findings, students in the experimental group are very interested in acquiring badminton abilities after using a smartphone-based mobile learning mode. The experimentation group's pupils use mobile learning. In the second classroom, students may utilise technological devices to study at any time and from any location. With this option, students may pick their teacher, class time, and location online, which facilitates learning and speeds up the process.Students may interact with the service terminal for instruction, but they can also use the Internet to talk to other students who have similar interests. This kind of education greatly improves students' learning lives and satisfies their demand to interact with the outside world. Because mobile learning is convenient, quick, and well-liked, students are not restricted to the classroom. They may learn English outside of class and do independent research using the Internet, and their grades improve at the pace. This fragmented learning approach is practical, and the second classroom has a complementing impact on the learning of the pupils. Students may manage their time more effectively and gain knowledge about various cultures in the

second classroom. Installing English learning applications on each student's mobile phone may help students study more effectively. These cultures from other nations are highly beneficial to students' learning and development, and knowing about different cultures can enhance students' understanding of English. As smartphone-based mobile learning mode develops, with the constant enrichment of mobile learning resources and the increasing functions of smartphones, the smartphone-based mobile learning mode will be detached from the education mode primarily for supplementary teaching and will become the main tool for teaching English educationally[9], [10].

CONCLUSION

Smartphones have generally been extensively employed to accomplish a mobile learning mode for English education teaching courses in colleges and universities due to the quick growth of mobile communication technology. Therefore, in terms of mobile teaching mode, mobile teaching material, mobile teaching assessment, and mobile teaching points, the English education staff at each institution may utilise smartphones and school networks based on smartphones in a fair manner. Finally, students from a variety of majors have increased English fitness and the educational impact of English.

REFERENCES

[1] R. B. S., “Online Course Management: Concepts, Methodologies, Tools, and Applications. Critical Explorations; Stupid Tutoring Systems, Intelligent Humans,” *Int. J. Artif. Intell. Educ.*, 2018.

[2] K. M. Alraimi *et al.*, “Research & practice in assessment research & practice in assessment,” *Procedia - Soc. Behav. Sci.*, 2014.

[3] M. Baptista Nunes and M. McPherson, *Proceedings of the International Conference e-Learning 2014. Multi Conference on Computer Science and Information Systems (Lisbon, Portugal, July 15-19, 2014)*. 2014.

[4] R. M. Miller and M. S. Andrade, “The Effects of Test Question Order on Task Persistence,” *Procedia - Soc. Behav. Sci.*, 2014.

[5] L.-F. Lin *et al.*, “News and notes,” *System*, 2014.

[6] F. . Fanni *et al.*, “Distance learning across continents: What is a ‘Traditional Learner’ anyway?,” *Int. J. Educ. Dev. using Inf. Commun. Technol.*, 2005.

[7] C. Conway *et al.*, “INTERCULTURAL COMMUNICATION - READER - SAMOVAR,LA AND PORTER,RE,” *Int. J. Intercult. RELATIONS*, 2013.

[8] M. Abdellatief *et al.*, “What are Learning Analytics?,” *J. Comput. Sci.*, 2014.

[9] T. De Jong *et al.*, “INTERNATIONAL JOURNAL OF SPECIAL EDUCATION Vol 31, No: 1, 2016 EFFECTIVE PRACTICE IN INCLUSIVE AND SPECIAL NEEDS EDUCATION Jorun Buli-Holmberg,” *Comput. Educ.*, .

[10] K. J. Kim *et al.*, “Six Strategies for E ff ective Learning,” *Handb. Self-Regulation Learn. Perform.*, .