Utilization Of Computers For Effective English Education Focusing On Vocabulary Reading And Listening Learning

Dr. Abdul Latif Roshan

Chancellor of Bakhtar University

Bakhtar University, Kabul, Afghanistan

Email: abdul.latif@bakhtar.edu.af

Abstract

Almost every part of our lives is now being affected by computer technology in a big way. The development of CALL (Computer Assisted Language Learning) programmes and multimedia courseware has excited the field of English language learning and teaching. They are trying to figure out how the CALL courseware can be used to make English language learning and teaching more effective. This paper looks at the history of CALL and the benefits and drawbacks of using computers to learn and teach English, as well as how they can be used. In addition, it looks at CALL courseware for vocabulary building, reading, and listening comprehension. CALL is also used in classrooms in Great Britain and the United States. Finally, it looks at how CALL and CD-ROMs, pendrive or other storage devides are used in classrooms in India and gives advice on how to use them.

Keyword:

Computer Assisted Language Learning, Computer Technology, Call COU, English Language Learning, Multimedia, Teaching, Programmes, Development, Call

Introduction

The computer has made a big difference in our daily lives, as well as in schools, businesses, factories, and every other part of our society. This is because computer technology has made computers cheaper and smaller in size, while also making them more powerful and easier to use. As a result, the number of people who own a computer is growing. Computers are now important not only for experts, but for people from almost all walks of life. Computers have become a big concern for educators in the wake of these times, and a lot of schools are setting up computer education and a whole education system with computers.

Computer Based Education (CBE) developed from Computer Assisted Instruction (CAI) using a large computer in the 1960s (Lowe, 2001). As a result, the rapid development of computer technology in the 1980s and 1990s caught the attention of language teachers because it made it possible for people to speak and see graphics, as well as real photos, which had not been possible before. The combination of a computer's huge amount of data processing power, voice support, and multimedia makes a big difference in language education, especially English education, and creates a new way to teach and learn.(Bamrung, 2000). Therefore, the development process of CAI for English education, advantages and limitations of computer use in English education, types of English CAL programs and programs used for vocabulary reading, listening comprehension learning, and examples of how computers are used in real classrooms are reviewed. Looking at it, I would like to suggest a way to use such programs for English education in the Afghanistan context.

Computer and English education

Language education using computer

In fact, CALL developed as a consequence of study and experiments conducted over a long period of time rather than as a direct result of the introduction of computers into classrooms and classroom instruction. There was a debate in the 1940s concerning the educational use of computers, but after that, pedagogical academics explored the educational qualities of computers and continued their study on how to use and integrate them into learning programmes and curricula.

Around 1920, long before computers were invented, Pressy devised a teaching machine and attempted to learn by trial and error through multiple-choice tests. and individual learning (Benjamin, 1988). However, CALL in

the modern sense, which was developed with the invention of the computer, can be said to be the product of various studies on the use of computers for language learning.

Research on CALL

The growth of computational linguistics and machine translation has had a major influence on computer-assisted language learning, and some research is directly tied to language education. (Ken Beatty, 2010). Researchers and educators in the field of linguistics and education began utilising computers in the 1960s and 1970s to do research, and computers began to be used in language teaching and learning (Bai, 2018). In the mid-1960s, Van Campen at Stanford University in the United States began a research project on teaching Russian using a computer. Students would practise asking and answering questions, as well as translating, on a computer designed for teaching purposes.(Shirley, 1984). However, in the course of the research, the hardware was changed and instead of the teletype and the recorder, a bilingual visual display unit and a computer-generated audio system were developed.

The PLATO system, developed at the University of Illinois, is another successful computer-aided education project in the United States (Ken Beatty, 2010). To help students learn to translate written Russian into English, the Control Data Corporation (CDC) developed a system that included a computer and a terminal. An online version of a computer software and application that allows you to practise, explain, and score vocabulary, as well as track student progress, is included in this course. In the 1970s, this method gained popularity and was implemented in the teaching of a variety of languages, including Russian, English, Chinese, French, German, and Latin (Noble, 2019). Nevertheless, the exorbitant cost remained a big downside. During the early 1970s, the National Science Foundation collaborated with Brigham Young University and Miter Company to develop TICCIT (Time Shared Interactive Computer Controlled Instructional Television) as a way to use computers in education to help the Soviet Union advance in mathematics and science. Language instruction was, however, where this approach had the greatest impact (Alderman, 1978). The Learner-Controlled Instruction (LCI) approach is used in this system, which is developed for adults (Noble, 2019). The Dartmouth system, created at Dartmouth University in the United States, and the Scientific Language Project, created by Alford at the University of Essex, are two further options.

Large computers were required to run these systems. Teachers and students were able to utilise computers more frequently than in the past because to the widespread availability of microcomputers in the late 1970s. As computers and multimedia have advanced, new opportunities for language education have arisen. This necessitates the creation of innovative approaches to language instruction.

The role of computers in English education

Computer-Assisted/Computer-Aided Instruction (CAI), Computer-Assisted Language Professor (Computer-Assisted Language Instruction; CALI), Computer-Assisted/Computer-Aided learning (CAL), Computer-Assisted Language Learning (CALL), or Computer-Based Instruction; CBI), are some of the new words that have emerged to describe the educational use of computers.

A neologism used to describe the computer's role in English teaching is that it not only offers the language data and questions pupils need, but also gathers and processes their replies and makes judgments on the form and structure of the language data given. Observing students' reactions and tracking class or unit time spent in more active ways is now feasible (Harper, 2021; Marr, 2022). Administrative tasks, evaluation tasks, teaching aids, and instructional domains are all areas where computers may be put to practical use. It implies that computers may be used for a variety of administrative tasks, such as creating and verifying schedules, preparing and monitoring English curricula, altering Fisheries Department curricula, and creating and monitoring English courses. Schools, instructors, and students are evaluated in the 'evaluation area' to see whether they have met the aims of the curriculum and syllabus, as well as to see if pupils have met the educational goals set by the English teacher. It runs a variety of examinations and assessments to evaluate students' performance and English proficiency and gives relevant comments.

Because of this computer may also be used by individuals or small groups of students to track and assess their personal development, as well as their level of English proficiency and their capacity to gather the data needed to go on to the next level.

Teaching assistance area refers to the use of the computer as a video recorder, picture, or real-like visual and auditory content in English courses, rather than as the primary tool. Role-playing and providing statistics are both possible uses of this tool. The term "teaching domain" refers to the ability of English teachers to use a

variety of teaching techniques and present models to help students improve their English learning abilities while in the classroom. Teachers and students both benefit much from the use of computers, yet there are several debates over the impact they have on the teaching and learning of English.

Trends in English CALL programs

An examination of English CALL up to 1990 indicates that the mainstay has been programmes of repeated practise and individual hanging, but owing to the advent of multimedia, problem-solving, simulation, and game-type programmes that support varied visuals and voice are now also produced. As a result, there are five distinct sorts to choose from (Abdellatief et al., 2014; Wyatt, 1982)

i. Repetition Practice (Drill and Practice)

In order to meet teaching and learning objectives, the repetition practise software mechanically manipulates words or sentences. Using transformation and substitution drills in the classroom is a great way to get students to practice their skills. A single word is all that is required to answer to a single statement. Hence the goal of the curriculum is to acquire a basic understanding of syntax, word form changes and other aspects of the English language. Learners will get a thorough understanding of English grammar, vocabulary, and syntax by analysing their mistakes (Lim Chap Samand Tang, 2012).

ii. Private Professor (Tutorials)

The private tutoring program is a program in which students are presented with new language materials and then asked about the information and given feedback. Like English textbooks or reference books, this program presents new language materials using charts, examples, and example sentences that show the meaning of English words or sentences, change of word forms or grammatical rules, and help students develop their idols through practice and question-and-answer activities as a harvest activity. Check your level of understanding. This program uses techniques such as animation, graphics, color, voice and various fonts to effectively present learning materials (Alotaibi, 2014; Garrett, 2009).

iii. Problem Solving

When it comes to training, problem-solving methods are superior to repetition. Data stored in computers can be used to help computer users solve issues, or various procedures and processes for problem solving are

provided to learners in order to get them thinking about solving problems themselves (Torat, 2000).

iv. Simulation

Simulation is a technique in which the computer creates a scenario in which students may take part and interact. Students make decisions or respond to activities represented by graphics or computer-based CD ROMs, video discs, multimedia, etc. This program's impact on English education has been well documented (Peterson, 2010).

v. Game

For students to have a positive CALL experience, a gaming programme should integrate English language and cultural elements. Students can build response abilities that demand reading comprehension and critical thinking for a huge quantity of linguistic content by making decisions in the game. Programs for word games, situational tasks, and games for practise while keeping track of scores are also available. Playing these games is a great method for children to apply their logic, reasoning, and organising abilities in a delightful way while having a lot of fun. Stinky learning games may also have a major impact if they are used in conjunction with careful selection of subjects that students find dull and difficult to teach. It's common for CALL to use this sort of categorization system. A well-designed personal hanging programme will include a substantial amount of practise and simulation, similar to what you'd get in a classroom. Repetition programmes are sometimes viewed as mechanical and tiresome, however there are those that may be classed as problem-solving systems that are well-crafted. Fortunately, CALL has evolved into a larger and more integrated software as a result of its development employing multimedia (Ken Beatty, 2010).

CALL program for vocabulary learning

The development of one's vocabulary is critical to one's success in learning a foreign language. By far, the most essential aspect in understanding the target language (Higgs & Clifford; 1982; Cmaggio, 1986:19–24) is vocabulary. Despite this, vocabulary training and acquisition are often overlooked in the classroom. Due to a paucity of class time, teachers tend to prioritise grammar and reading comprehension abilities above vocabulary development, leading to the misconception that vocabulary can be learnt independently by students. As a result, teachers can achieve good results by demonstrating appropriate vocabulary learning

CALL and instructing their students to use it both in the classroom and in their own study and research (Ma & Kelly, 2006).

i. Spelling Program

The spelling map serves as a call to action in the form of recurrence. Using a computer saves time, ensures accuracy, and allows students to receive immediate feedback. Those who reply appropriately are removed from the workforce, and those who don't are re-trained. There is no need to rehearse vocabulary that you have already learned because of this method (Ken Beatty, 2010).

Various spelling systems have been created by the Minesota Educational Computing Consortium (MECC) With the help of Spelling Workout, you may get a diagnostic and a treatment plan based on the test-learn-test technique. For every one of the 6,700 words included in the Spelling Toolkit, there are explanations, examples, and three different ways to spell each word. The editor also allows you to add your own terms. Repetition and gaming mechanics are employed in Magic Spells. ' Furthermore, games that may be played and garner positive ratings have been created for challenging jobs. This is a software for students in the lower grades, and it is easy to add words. Voices connected with spelling may now be heard thanks to advances in speech generating technology (Jones & Vaughan, 1983).

You may improve your decoding abilities and increase your visual vocabulary by having Talking Text Writer read everything you type. It's a voice assistant app for the Apple GS called "Reader Rabbit." Lower grades can benefit greatly from the four different types of games that aid with spelling recognition and understanding, as well as from the addition of voice support for vocabulary and decoding as well as pronunciation and reading comprehension (Lacina, 2004).

ii. Word Learning Program

Microsoft Word is pre-installed on virtually every PC. Composing is a typical usage for these programmes. Regular features include spell- and grammar-checkers, as well as basic thesaurus programmes. Students could only use a dictionary to check their own spelling. Students are increasingly using computer-based spell checkers rather than a dictionary or an online dictionary to rectify their spelling mistakes (G. W. Smith & Smith, 1991). The majority of word processors and other programmes are designed for corporate use, where learning is less

important, if not nonexistent. In business, getting a job done quickly and accurately is a top concern. This can be found in programmes that correct spelling but don't explain what they've done. The majority of students, especially those learning a second language, frequently make spelling mistakes and simply accept the first solution they are given. Word processors, on the other hand, don't record misspellings or provide feedback to pupils who find an image that exhibits hyponyms and related words. Despite the time it takes, it's a richer method.

Grammar support is available in many word processors, however it isn't always helpful. Microsoft Word's grammar checker, for example, is preprogrammed to reject proper use of passive voice. Learners may not comprehend why this and other restrictions can be muted in the programme. Microsoft Word, for example, is getting more flexible. To generate semi-authentic learning materials, teachers (and students) utilise it to make rudimentary webpages, which include text and photos (Ken Beatty, 2010).

iii. Reader Rabbit Analysis

Reader Rabbit is a word-learning app for young children that engages them with images and sounds. Learning the alphabet or basic words are required in the early stages of learning English. This programme is basically basic education. This software has four games: Sorter (spelling), Labeler (synthesis), Word Train (finding similar vocabulary), and Matchup (matching) (Matching). Instruction is divided into four sections. You can select the part to learn.

"Sorter Game" teaches the student to recognise individual letters even if they do not know the name of the English alphabet.

Video Game Naming "To begin, you'll see three photos with text. Then three more photographs are shown, with the associated words' spellings mixed in at the bottom. The goal is to match words to visuals. Words With Friends" "On." is a game where only one of the three letters in each word is related to another. For example, if the front and back words are "vet, vat, tat, tot", the train in the screen travels ahead and another train waits. A matchup game is a game where two pictures are matched up with one another. It has building games (Rabbit, 1998).

iv. Word Attack Plus Analysis

While Reader Rabbit is a programme for younger students, Word Attack Plus is a tool to boost vocabulary in older students and provides students different options to contact each target word. One of the best educational games on the market today. Fun mini-games help you improve your writing and speaking skills in Word Attack Plus, which is suitable for ages 9 to adult. Learning the correct definitions of words, as well as learning how to employ them correctly in phrases, are all aspects of building a wide vocabulary.

As a bonus, the game includes an arcade-style vocabulary game with the possibility to add new words in different typefaces for French, Spanish, and German. Learning vocabulary is made easier with the "Word Display" feature, which displays definitions and examples of usage on flashcards. With an extensive in-game logging system, teachers or parents may monitor their kids' progress and even build quizzes using the easy-to use quiz development applet.

Although the game has been around for more than two decades, it is still enjoyable for players of all ages to play (Hotud, 1988).

v. CALL program for reading comprehension

There are three basic kinds of computer-assisted methods for increasing reading comprehension. The first is the classic reading comprehension approach, which gives brief reading materials and provides question-and-answer questions and relevant feedback. An activity's goal is the accumulation of accidental reading that was done in the process of trying to solve an issue. As a successful solution, it is a method to read a group of textbooks, and the third is a text manipulation method, which enables learners to learn various selective learning by taking advantage of the vast and rapid information processing of computers so that they can study the contents and structure of the textbook in detail (Dorkchandra, 2010).

Reading Comprehension

EFL/ESL researchers in the field of reading strategy instruction have started teaching the text structure reading strategy through Web-based CALL programmes in recent years because of the importance of teaching the strategy and the positive effects of using Web-based CALL programmes for teaching reading strategies (Theodorou, 2006).

There have been a number of Web-based CALL programmes designed to teach students reading methods,

and it was discovered that most systems were helpful in this regard (Cole, 2005; Johnson-Glenberg, 2005; Lynch et al., 2000).

In addition, research in L2 reading has supported the use of Web-based CALL applications because they encourage active learning and interactive education. Students can study at their own speed with a Web-based CALL programme (Klassen & Milton, 1999). Embedded reading features in web-based CALL programmes help students improve their reading comprehension. After the workouts are over, they can look through the data they collected using these tools. As their abilities and levels progress, they graduate from easier to more challenging workouts. To help pupils who do things wrong, the programme might offer exercises or even explanations during their activity.

In addition, students typically had positive attitudes on the teaching of L2 reading strategy via web-based CALL tools, as was discovered. Using 22 students from 12 different countries and 12 different languages, created a Web-based CALL application for teaching reading skills, including text structure strategy. The programme was tested with overwhelmingly positive results by the students. Web-based CALL programmes incorporated with multiple modalities, such as sound and visuals, were found to be popular with students, according to (Al-Seghayer, 2005). However, when it comes to Web-based CALL programmes designed to teach EFL students the text structure reading method, little study has been done. As far as the researcher knows, there is no research on the impacts of a Web-based CALL programme specifically designed to teach Thai university EFL students of medium and low English ability the text structure reading approach. As a result, it is clear that a Web-based CALL programme for teaching text structure approach to Thai university EFL students is both necessary and urgent. On the basis of this pressing necessity, this study was conducted: The majority of past research on text structure reading strategy instruction has focused on ESL/EFL students who use English as their primary language of instruction, according to a survey of the relevant literature (Theodorou, 2006). It is not possible to extrapolate the quantitative and qualitative findings from these research to cover the instruction of text structure reading method for the Thai university EFL students, as they are mainly from medium and poor English proficiency backgrounds. However, this study was designed to examine the impact of a Web-based CALL programme designed specifically for Thai university EFL

students with medium and poor English competence. This was done by using both L1 (Thai) and L2 (English) as a teaching medium. As a result, the study's findings may be applied to all Thai students of a similar level of English ability.

Another issue is that previous research into the effects of Web-based CALL programmes on EFL students' reading comprehension of expository texts in English did not provide enough qualitative findings relevant to students' opinions about learning with the programmes, particularly in terms of the application of strategy knowledge and ways to adapt the programmes for contexts other than those where English is used. A web-based CALL software was tested in this study using a variety of data collection approaches (a written questionnaire and an interview). Thus, the study's findings would contribute to a better comprehension and knowledge of the subject matter in general.

SLA theory and constructivist techniques were incorporated into a Web-based CALL programme for teaching text structure reading strategy, which required participants to read and practise expository text-related tasks. Consequently the theoretical implications of this study are noteworthy. For L2 reading strategy researchers who create a Web-based CALL programme that uses SLA principles, findings from this study could lead to a much wider consideration and use of SLA principles in the design and implementation of a Web-based CALL programme. To build a Web-based CALL programme that focuses on the attention, perception, increased memory, individual learning, discovery learning and knowledge construction as well as authentic tasks and activities was also employed in this study. Web-based CALL programmes for teaching text structure reading technique should benefit from its findings in connection to these two theories of learning. Consequently, they may motivate university-level EFL reading teachers to incorporate or perhaps build a CALL programme, as well as individuals who wish to improve their reading skills.

CALL program for listening comprehension

Since the 1960s, computers have been used to teach languages. Structural CALL (1970-1980's), Communicative CALL (1980-1990's) and Integrative CALL (1990's-1990's) are the three major CALL terms that have evolved from their inception (21st century). Computer technology and language acquisition theories are linked in each phrase. LANs, multimedia, and hypermedia-linked resources have all been made available

by the advent of powerful PCs and the current term for CALL: Integrative CALL (Lee, 2007). Integrative CALL emphasises the use of Web-based activities, rather than traditional language-learning software and CD-ROMs, pendrive or other storage devides, to provide students greater control over how and when they access information (Fotos & Browne, 2013).

Learning a new language is easier than ever before because to the wide selection of resources available on the Internet. For language acquisition, the usage of multimedia in addition to text is beneficial (Al-Seghayer, 2005). Web-based resources not only make it possible for students to gain access to a wide range of authentic materials, but they also allow students to practise their language skills over and over again (Hubbard, Kessler, & Madden, 2004). The Web-based practise tools also provide a wide range of learning and assessment contexts, allowing for a variety of teaching and evaluation methods (Lee, 2007). Learners benefit from this kind of adaptability by receiving fast feedback that allows them to make necessary adjustments.

For one thing, Web-based CALL can help students achieve greater independence and better long-term results because they can access vast amounts of relevant information via computer technology; explore and browse through different options; expose themselves to both linguistic input as well as socio-cultural knowledge through computer technology; and finally, make their own evaluations and suggestions regarding what works best for them, how to improve it and how to do it; (Sheerin, 1997; Sturtridge, 2014). Students' engagement, willingness, motivation, and autonomy grow as a result (Rowsell & Libben, 1994).

CALL and Web technology's impact on second and foreign language instruction has been examined because of its widespread use. The integration of CALL and Web technologies in the domain of second and foreign language acquisition has been endorsed by numerous scholars and practitioners (Cobb, 2002; Murray et al., 2004; Warschauer & Healey, 1998).

Technology and Listening Comprehension

It's no secret that mastering a language begins with mastering the art of listening. In addition to being a vital language and communication ability in its own right, it also serves as a conduit for the reception and incorporation of new language (Brett, 1997). It is possible for a large number of students to benefit from Web-based CALL because of the flexibility and variety of content, approach, and media that computers and the

Internet provide. A virtual and real-world learning environment allows pupils to practise listening. In addition, Web-based CALL encourages learning interests since students can search for appropriate information on the Internet rather than being limited to a pre-designed course model (Wijekumar, 2005).

A lot of studies have shown that using computers and the Internet to teach listening comprehension is more efficient and successful than traditional methods. The use of computer-based multimedia programmes to improve listening skills was investigated by (Brett, 1997). The results demonstrate that multimedia significantly improves listening comprehension. Researchers Klassen and Milton (1999) found that CALL was an effective tool for improving students' listening abilities (Klassen & Milton, 1999). A research by Smidt and Hegelheimer (2004) looked at how Web-based information was accessed (Smidt & Hegelheimer, 2004). Multimedia-enhanced online academic lectures improve listening comprehension, according to this study. For the same reasons as those cited by Smidt and Hegelheimer (2004), Zhou and Yang (2004) found that the use of multimedia aids to improve EFL students' listening comprehension was effective. According to them, learners with low-level English proficiency benefit greatly from viewing-assisted functions (Smidt & Hegelheimer, 2004). An evaluation by Wong (2006) of a Web-based listening programme for Chinese University students who are not English language majors shows the value of Web-based learning, when used in conjunction with traditional classroom instruction. Furthermore, she says, because it's self-accessible on the Web, the listening programme takes into account important aspects of second language acquisition, such as learner diversity and changed interaction (Wang, 2006).

Learner Attitudes

The success of CALL in language learning is heavily influenced by the attitudes of the students toward it. The favourable response students have to CALL as a language learning strategy, according to Smith (2000), shows that students can get the most out of technological advancements in language learning (M. Smith, 2000). In their investigations, Aacken (1999) and Lasagabaster and Sierra (2003) found a favourable correlation between students' views about CALL and their ability to learn a language effectively (Lasagabaster & Manuel Sierra, 2003; van Aacken, 1999). According to Klassen and Milton (1999), students' reactions to CALL have a direct correlation with their language learning outcomes (Klassen & Milton, 1999).

Students' general good attitude toward CALL is supported by most studies, however others dispute the efficiency of CALL integration into language instruction because of negative student attitudes toward CALL. The use of CALL in language acquisition is resisted by students because of their computer phobia, according to Bloom (1985). The navigational abilities of students, especially those with lower proficiency, may not have been developed enough to find what they are looking for or to use the material (Bloom, 1985). CALL could be perceived as a "unwelcome" move by some. Some students may be reluctant to participate in CALL because of the time and effort it needs, especially during the transitional stage (Sussex, 1998).

Researchers have argued that students' opinions should be taken into account while evaluating CALL in language acquisition. It is also important to examine how Web-based CALL affects students' listening comprehension by looking at how learners' views regarding Web-based CALL are related to the success of Web-based CALL (Lasagabaster & Manuel Sierra, 2003).

Conclusion and Suggestions

The development of microcomputers and multimedia is increasing more and more opportunities to use computers for English education. The CALL programs reviewed so far showed potential applications to increase the efficiency of English education, but these examples provide motivation for research on how to apply and utilize CALL to English learning and teaching in the Afghanistan context. In this paper, CALL programs related to vocabulary, reading comprehension, and listening comprehension learning were mainly introduced, but many CALL programs related to other important fields of English education, such as grammar, writing, oral expression and evaluation, were also developed. In particular, the combination of computer and multimedia is diverse and interesting that was unimaginable before. We are creating an environment conducive to learning English in this way. The existing language lab can be used for multi-person classroom classes by installing an encoder on the computer. The conventional use of the language lab was only used for classes, but it did not help individualized learning. Even if the students used it for individualized learning, they soon became bored. There are cases in which seats are crowded enough to limit time by not leaving a seat, and other publications are disrupted by spending too much time in CALL learning. In the modern society that is changing day by day, English teachers need to understand the purpose

of the curriculum, know how computers can help teachers to achieve these goals, and use computers appropriately to achieve their goals. will be of great help to you. In addition, English educators need to study and apply how computers can be properly used in the overall system of English education. It is necessary to analyze and research the rapidly developing multimedia CALL to develop CALL courseware suitable for the Afghanistan situation. To do this, an English teacher with knowledge and ability about English, the theory of English teaching and learning, CALL knowledge, and an English education specialist A, education engineering experts, and computer experts collaborate to create the Detect problems, improve them, and adjust the amount according to the tastes and structures of India. Query CALL courseware development should be done. Computers cannot play the role of a panacea that can solve all problems in English education, but they are not a temporary fad. Just as humans greatly expanded human capabilities through the use of tools and machines, computers are the current references that can expand the capabilities of English teachers in a desirable direction.

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