

Technological Gaps on online English Language Teaching: E-Learning Insufficiency

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Abstract: Technology, in the year 2020, has attained its utmost use by becoming the solution for people across the world in all sectors. Despite the use of applications like Zoom, Google Meet, Kahoot, and Google Classroom, teaching language online has proved challenging without a live teacher. This paper aims to throw light on the technological gap and its pace that has not matched the necessity of the period. The analysis of an example from English Language Teaching will not show what technology lacks in this field but also serve as a guide for the developers of future artificially intelligent software and applications. As teaching and computing are two different fields, it is the researchers' duty to bridge the gap by meticulously explaining the limitations in the currently existing applications and the necessary features in the yet-to-be-developed ones.

Keywords: Insufficient Technology; ELT; applications; bridge; online teaching; Artificial Intelligence

1 Introduction

Can a machine ever replace a teacher?

From the times when information, knowledge and wisdom were taught by mere word-of-mouth, we have moved to gain those via books. However, throughout, there had and has always been a teacher- a person. Despite astounding inventions and changes across the world during every era, the field of education has not witnessed many revolutionary transformations. Science has always surprised us with unimaginable things; hence, one cannot set boundaries for the transitions expected in the future. The farthest some students have imagined is to insert the knowledge one wishes to gain using a chip or some easy and advanced method as per the brain capacity available in each person, without taking any effort from the students' side. This way, students could save the time required to gain theoretical and practical knowledge, explore the world and create or invent things. This thought might have been crazy and hilarious many years ago, but now we all know that it is highly plausible. After all, technology is all about reducing human workload. That is what it did when it came to audio-visual media, which has started to replace books. Be that as it may, that progress does not suffice in a field that is the root of future scientists, doctors and leaders. Or, maybe, the technology has advanced enough but has not been directed towards education [1-16].

1.2 Research Structure

In a recent issue of the journal *Learning, Media and Technology*, the Covid-19 ‘pandemic politics, pedagogies and practices characteristic of education in 2020’ has been discussed and reflected upon elaborately, calling for further research on applying technology for education and media [17]. Education is a vast field to consider for exemplifying any thought or idea. Hence, this paper takes English Language teaching to point out the drawbacks of current online teaching facilities. It recommends the necessary aspects to focus on while building the future mode of education. These aspects will not be futuristic-as they are not ideas-but points to be given importance to, in the case of education. An example of an application that guides error-free writing has been provided and analysed from various perspectives [19]. Moreover, a survey was conducted to elucidate this research statement. Although teaching Science, Mathematics, or other subjects is possible using the currently available applications without much strain, teaching language has been a challenge for teachers around the globe.

1.3 Why Now?

Although technology’s application in education is not a novel development, it was not fully used until recent times. While people hesitated to shift from classroom to online education methods, an epidemic (Covid-19) has forced people and organisations to learn to adapt to online means. In 2020, when online education was the only possibility, people gradually learned and used it effectively. While students searched for sites and applications that would guide them with their homework, teachers searched for ways to make their teaching interesting and effective, as the students’ attention span online is highly limited. Whilst people of other fields found it easier to work online, teaching online became a burden to many teachers because of the limitations in every application. Teachers try to make every class creative using quiz applications and others. Necessity is the mother of invention. This necessity for online education did not occur as an immediate need until everyone was forced to stay home for a year. With this sudden peak in demand, a rise in online education methods has also been expected. But unfortunately, technology has not been quick enough to match the pace of rising needs. This paper plans to serve as a call for the application, software developers, and others to act upon the need of the time. Moreover, computing and education are two different fields. Sufficient measures must be taken for the technology to be directed towards education. Research papers listing the necessities could easily serve as a guide for focussing on the expected solutions.

2 Available Applications

One cannot deny the existence of numerous applications that have made online education a good alternative during the pandemic. But considering the progress of science and the current information age, this transition towards digital classrooms should have been the best and not something people look forward to letting go of once the pandemic ends. This should have been a permanent and phenomenal solution. Some popular online teaching applications are Google Meet, Zoom, Google Classroom, Google forms, Google documents, Microsoft teams, Kahoot, Flip grid, YouTube, etc. Of these, some aid in live classes, some for homework and assignment submission, some for creating quizzes and some for creating interesting PowerPoints. But none of these has the option to auto-correct assignments except the Google Form, which auto-corrects the multiple-choice questions. While talking about self-education in the article *Future of Technology in Education*, Ekaterina Novoseltseva, a tech blogger, says that technology in this information age is advancing so much that the role of a teacher has shifted more towards being just a “guide on the side”, while the students whole-heartedly learn what exactly they want to learn on their own [12]. If the current period is already shifting towards unsupervised learning, we should already be equipped with software and applications that promote such a movement. But it is still in the developing stage. Besides, BBC Learning English, Hello English, and Speak Fluent English are some online applications available to teach English as a Second Language. But they could be useful only to a beginner or intermediate-level person. An advanced learner of English who would like to get their essays or reviews corrected would need a live teacher to correct them. Auto-correct for long passages with importance given to all the aspects of assessment has not been possible so far.

2.1 Drawbacks in Most Applications

From the analysis of the popular applications used for teaching online, it is evident that most of those satisfy basic needs and could be a temporary solution. With this positive push from the epidemic towards the technological world, it should be going higher and not getting down the ladder back to old-school methods. With some help from science, we could easily take this up to the next level. Zachary Pardos, an assistant professor at the University of California, Berkeley, says that auto grading could be enabled for problems or essays while preparing an online course. However, additional personalisation needs to be done from the technological side to devise adaptive learning. For an adaptive teaching system, the essential components are those which could regularly assess what a student knows, their knowledge in that particular discipline, suggestable tips, and customisable order of lessons. If human teachers were to assess and change all these as per each student regularly, they would soon be exhausted due to the colossal task [6].

3 Survey on Online Education

A survey was conducted using a Google Form questionnaire to know teachers' online teaching experience, and the following is the link to the questionnaire "<https://forms.gle/FkYrX5GdZKywFhYT7>." Below is a graphical representation (Fig. 1 and Fig. 2) of the answers to two of the questions asked in the survey.

Which of these difficulties do use face while teaching online? (choose all that apply)

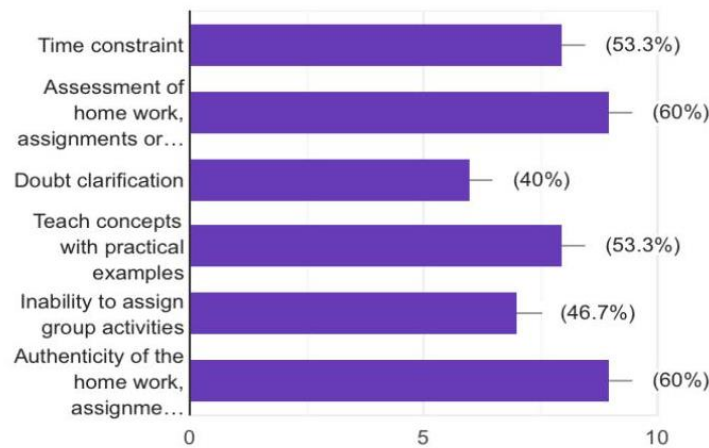


Figure 1: Teaching difficulties

From the graphs (Refer to Figs. 1 and 2), it is clear that most of the time, the drawback has been the assessment, authenticity of homework, practical classes and time constraint. We can see that 60% of the teachers found assessing homework and assignments to be highly stressful and difficult online. Checking the authenticity of homework and assignment also turns out to be hard for 60% of educators. It is not because there are not enough plagiarism-checking applications or sites but because those options are not in-built into the Google Classroom or other applications which teachers use. Likewise, 53% said that they hardly found time to conduct interesting activities or practical classes.

How do you find online assessments?

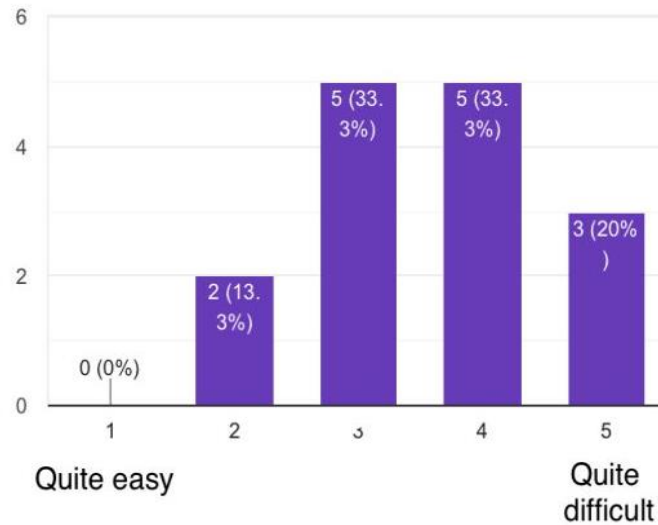


Figure 2: Online Assessments

The reason could be that they spend more time preparing the online material for teaching than before. Nor were they able to find time to provide additional guidance to the students who were slow in understanding concepts or completing assignments. The teachers nor the students have advanced notepads where they can make every minute correction using a pen on the screen. Whatever science invents should also be easily available for the users. They have made corrections in the students' work by inserting text boxes to mention the corrections, and it is a tedious procedure compared to usual notebook and paper corrections. All these are about education in the presence of a live teacher, where you have to guide yourself with the help of instructions, videos, assignments, etc. In the absence of a teacher, neither doubt clarification nor assessment happens without the supervision of a teacher.

We are looking forward to an artificially intelligent online bot that could play the role of a teacher or aid the teacher as much as possible to reduce the workload.

3.1 The Farthest use of Current Applications

To prove the lack of vital online assessment, the subject of ELT has been chosen. Of all the available applications, Proofreader has the option and sophistication to correct an essay or a paragraph, as shown in fig. 3

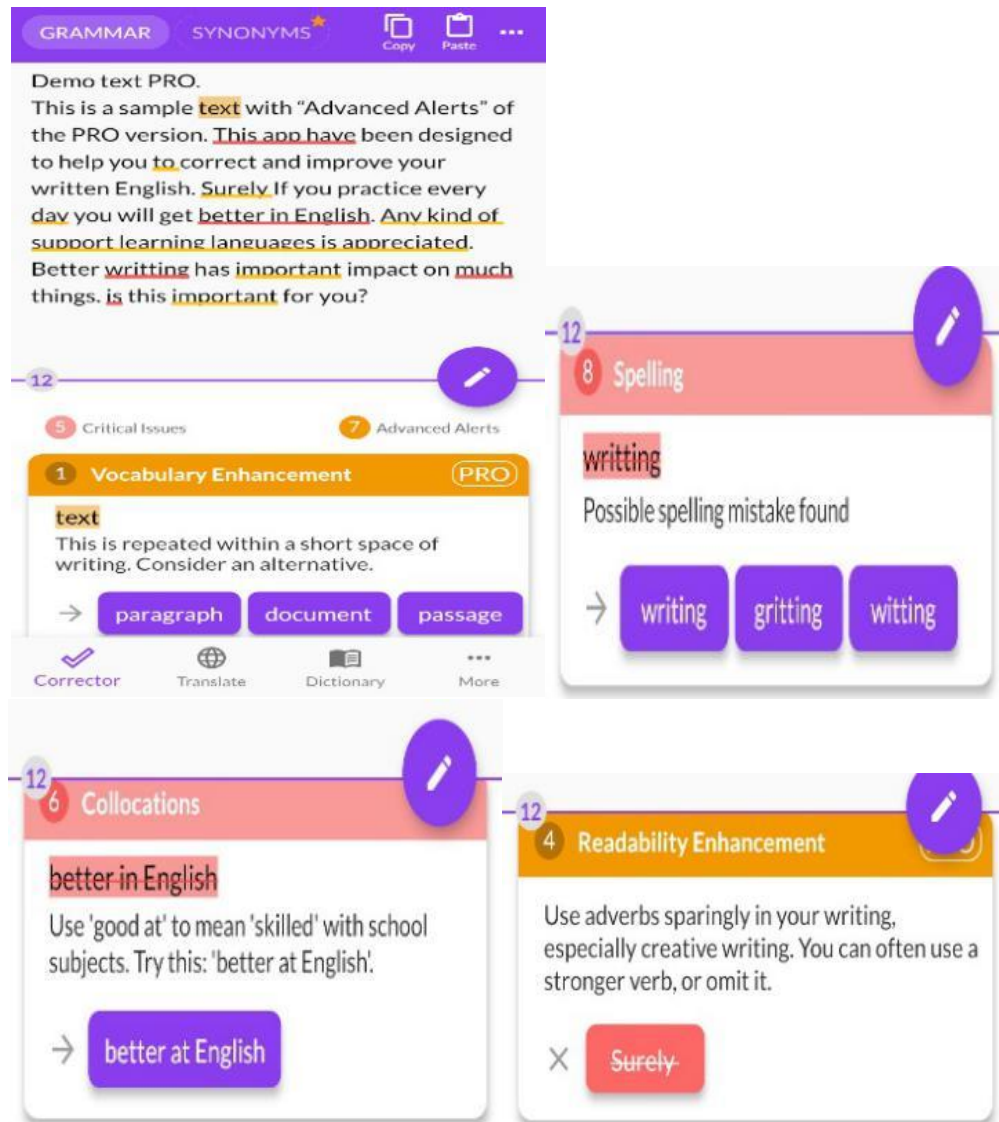


Figure 3: Online Proofreading

This image shows the demo text, which the Proofreader application has corrected. It also means that this text demo contains all the possible ways this app can correct. The only corrections it has focused on are vocabulary enhancement, grammar, readability enhancement, collocations, spelling, capitalisation and punctuation. These contribute just around 40% of language assessment. In language assessment, we must focus on multiple aspects such as context, clarity, relevance, coherence, brevity, student understanding, and background. A teacher would generally understand a student’s current knowledge, the pace of learning, skills they require immediately, etc., and then plan the next lesson or classes accordingly. For this customisation to happen, more efforts must be put into devising online courses. Artificial intelligence is required for a bot to understand a student to this level before providing lessons.

4 Recommendations for Technology Developers

Some of the details which should be focused on while assessing or clarifying a doubt are:

- i) **Content:** So far, no application has been designed to check the relevance of the content in an essay to the given topic. One could easily write perfectly framed grammar sentences and ace the course without understanding that content has a crucial role in any essay.
- ii) **Coherence:** Unless the auto-correcting bot is advanced enough to understand the cultural references, slang words, regional aspects the student means and others, it will not be able to assess the coherence or continuity or relevance between the sentences of paragraphs.
- iii) **Clarity:** One could easily beat around the bush and still be right in his/her (students') grammar. A paragraph could be filled with nonsensical but perfect sentences. One could not have delivered their point and still have completed the task. The bot will not be able to point out those as mistakes.
- iv) **Background:** There are numerous applications for teaching English as a second language. But all of them include just British and American English. A person who uses grammatically correct Indian English will still be marked wrong as it does not fall under the British or American English set as the standard English in those applications. As English is a language that continues to grow, similar to American English, Indian English, Australian English, African English and others should also be taken into account while creating an application. To incorporate those, in-depth research on English needs to be done, which is quite tedious and long. Science should grow irrespective of linguistic dominations or politics. An English language learner who grows up in an Indian environment cannot be expected to have a British or American accent or slang. It is a pretty vast issue that needs to be addressed by the linguists of the current times. A device or application that aims to understand all these factors should be AI-based.
- v) **Student's understanding:** Considering all the abovementioned aspects, a teacher could assess a student's level of understanding and devise his/her next lesson plans accordingly with a method that would grab the student's attention. A machine should possess high-level Artificial Intelligence to understand a student to this extent and customise its lessons. It is not an extremely futuristic thought. There are many AI-facilitated applications and devices these days. But whether they are sufficiently or to the full extent applied in education is a question mark. Learning a language does not concern writing skills alone. Reading, listening, and speaking skills are also equally important. Nevertheless, the currently available unsupervised online learning mode cannot check pronunciation, intonation, pace or fluency.

5 Views on Future Technology

According to [5], the available technological advancements have the potential to exceed mere teaching. With the assistance of Artificial Intelligence, online courses could also observe how students learn. Simultaneously, they could survey the type of tasks and thinking that hold the students' attention and the sort of problems they find tedious and dull. Following that, their learning process can be altered accordingly to fit every student's learning style. Most importantly, this could be done more accurately than any other usual face-to-face method. The examples and possibilities for the future of technology in education in an article [12]. As per the suggestion, bringing social media into education could allow learners and educators to post their thoughts, ideas, and comments in an interactive learning environment, where students could follow influencers and learn from their posts. Another idea is to create better digital simulations and models that could aid teachers teach ideas and concepts normally not demonstratable in a classroom. Epistemic games are yet another concept, where "commercial game-like simulations put students in roles like a city planner, journalist, or engineer and ask them to solve real-world problems". Innovative thinking requires more than knowledge of the right answers in a test. To become a creative professional, one should possess "real-world skills, high standards, professional values, a particular way of thinking about problems and

justifying solutions”. There are a lot of other suggestions in the article that future developers could look into and gain ideas.

6 Conclusion

The problem is probably not that the technology is not advanced enough but that it has not been used adequately for assisting pedagogy. The expected advancements in technology for online education are not necessary for the future but for the current period. It is a fact that teachers and students struggled to get into the habit of using online means for education. Some still find it tedious and look forward to returning to face-to-face classes. The reason behind this is teachers’ and students’ lack of effective training in using technology. This has been one of the main reasons educational institutions, teachers, and many organisations stall using ICT in their daily lesson plans. But now that they all have been introduced to it, they should feel encouraged to continue this way. Regrettably, the added workloads and difficulties made them feel right about avoiding technology so far. Janssen stresses the need for teachers to be involved in planning the technology to address their instructional needs. Failing, they would stop encompassing digital technologies as soon as things return to normal (2020). This research is a reminder for the application developers to focus on the essential aspects recommended by teachers and researchers in the field of pedagogy as well. “University educators perhaps need to temper enthusiasms for what might be achieved through technology-enabled learning and develop better understandings of the realities of students’ encounters with digital technology.” The answer to the question of whether a machine could ever replace a teacher is not a matter of ‘could’ or ‘could not’. The machine WILL replace a regular teacher in due time. But it is the researchers’ and developers’ duty to ensure that nothing has been compromised and that the replacement is for the best.

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