

Providing scaffolding and feedback when reading authentic texts in the online lessons

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Abstract. A strategy of preparing and reading authentic texts in fully online classes in senior school is suggested. This strategy, based on cloud technology, provides scaffolding and feedback as students read authentic texts during online lessons. Preparing and activity stages are suggested, and possible cloud tools are analysed for each stage. The key idea of our approach is to organise feedback during silent reading with the use of specialised software that allows learners to underline some words by simply clicking them. Some examples of using this feedback are suggested for basic comprehension and then for intensive reading and content discussion. The proposed approach was implemented in the village secondary school, and the results are discussed.

Keywords: senior school, cloud technologies, L2 English learners, reading competences, education, online classes, the environment

1. Introduction

The topicality of developing reading competence among senior school students is driven by the demands of modern higher education and professional environments, which require processing vast amounts of information. At this educational stage, reading ceases to be merely a language-learning exercise and becomes a primary tool for autonomous knowledge acquisition. For senior students, mastering diverse reading strategies is essential for academic literacy. Reading is a very important component in the system of communicative competences according to CEFR. The Ukrainian Ministry of Education and Science has approved the educational programmes in foreign languages [20], in which one of the objectives in senior school is to read and understand authentic texts of different genres. This competence involves a shift from basic comprehension to a differentiated approach, where students must fluidly alternate between skimming and scanning to locate key information quickly, and intensive reading to analyse complex authentic texts deeply.

The transition to online education has significantly altered the dynamics of autonomous learning, particularly during silent reading tasks. In traditional classroom settings, teachers rely on direct pedagogical observation to monitor student engagement and provide timely scaffolding. However, in synchronous online lessons, this vital feedback loop is broken. The teacher does not rely on conventional visual cues, a challenge further exacerbated by the widespread practice that students switch off their cameras due to technical constraints or personal preferences. Consequently, educators cannot effectively verify whether students are actively engaged with the authentic text, nor can they identify who requires immediate support. This lack of real-time diagnostics reduces the effectiveness of independent reading activities and highlights a critical need for alternative pedagogical tools. To address this issue, our study focuses on pedagogical feedback by tracking reading progress and identifying students who require direct management of their independent work.

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To study the current state of this problem, a narrative review of scientific sources has been done through the Scopus search system according to the search query: TITLE-ABS-KEY ("Reading" ("online educational process" OR "online classes" OR "distance learning" OR "online study" OR "online learning" OR "online study") "English") AND PUBYEAR > 2019 AND PUBYEAR < 2027 AND (LIMIT-TO (OA,"all")). 102 documents have been found and serve as the basis for the review.

The worldwide adoption of a fully online classroom that started during the COVID-19 pandemic sparked researchers' interest in student engagement and in improving reading comprehension in online learning environments. And we can see that the challenges of reading in online classes are not only a Ukrainian problem; they are common across many countries. For example, the authors from Saudi Arabia and Qatar, on the base of their empirical study, state negative sides of conducting the reading module online [10]: attendance and participation of the students are significantly less; only a few students are interested to know about the text material; it becomes difficult to monitor students' independent work; students feel less motivated to interact with the teacher; there are barely any discussions with classmates etc.

In 2021, Indonesian educators studied the influence of online environments [27]. They have compared improving student engagement and reading comprehension skills across two variants of the online flipped learning scheme: with Microsoft Teams or WhatsApp, and have shown that using more advanced Microsoft Teams tools yields better results, as indicated by estimated marginal means of the learning outcome. This effect becomes more dramatic when student engagement with reading comprehension skills is low.

An international collaboration team between Indonesian and Japanese researchers has examined a specific, specialised educational software called the Kit-Build (KB) concept map authoring tool [25]. This tool uses artificial intelligence to semi-automatically extract keywords and propositions from English texts, helping students visualise text structure.

Using a massively multiplayer online role-playing game (MMORPG) has been suggested as a tool for improving students' English reading skills, specifically in identifying main ideas at a university in Nakhon Ratchasima, Thailand [6]. The authors suggest that incorporating a systematically designed massively multiplayer online role-playing game (MMORPG) into the curriculum is an effective alternative teaching method to enhance students' English reading comprehension and intrinsic motivation. Such a game assumes a large number of players interact with one another in writing mode within a virtual world. They also suggest that course developers and educators should acquire the necessary technical skills and game coding knowledge to successfully customise online games into educational tools that align with specific learning objectives. Furthermore, they recommend that teachers and game developers utilise visually appealing game maps, graphics, and storytelling elements to transform educational gameplay into engaging quests that capture students' attention.

Research conducted at a Malaysian university has found a high level of reading anxiety in the online distance-learning process [13]. The authors state that the requirement of attending classes via online distance learning mode is the main cause for reading anxiety, while self-perceived English proficiency also influences reading anxiety significantly. The authors recommend clear and constant instructor feedback as a necessary element of online reading classes, because learners may easily divert from the syllabus's purpose. Otherwise, the comparative research of reading anxiety in face-to-face and online groups of North Khorasan University of Medical Sciences has found that "...the face-to-face group had higher mean reading anxiety levels compared to the online group" [28, p. 1]. In this study, the Sama Live App for an online program has been used. It included multimedia resources, discussion forums, and virtual group activities. The authors state that online environments reduce anxiety by providing flexibility for self-paced engagement, mitigating the social pressures (like reading aloud) inherent to traditional classrooms, and offering tailored resources that enhance comprehension. Therefore, we can conclude that an appropriate online environment can reduce the disadvantages of online classes and enhance their advantages.

Chinese educators have suggested collaborative quizzes and discussions to involve students in reading activity [31, p. 6]. "The participants in this research were 71 EFL students, aged between 18 and 30 years old, who were enrolled in an English language course at a large language institute in

mainland China” [31]. While watching the videos, the students actively engaged in group discussions, exchanged ideas, and worked together to complete the accompanying online video quizzes as a single unit. The groups used Google Hangouts for real-time collaboration and synchronous video conferencing during their online viewing sessions. The online collaborative sessions were recorded and securely submitted to the instructor, who reviewed them and provided periodic feedback. Of course, we should take into account the students’ level of self-management and proficiency, which was much higher in this research than in ordinary Ukrainian senior schools. Other authors also suggest reading activities in which students are organised into small-group discussions (e.g., using online breakout rooms) comprising a combination of high, medium, and low achievers to encourage active interaction with the text and facilitate peer collaboration skills [12]. These authors suggest flexibility to choose an interesting text for peer discussion, summarise it, and directly share the information during a classroom discussion [12]. They have concluded that to ensure proper scaffolding, the interaction must be supported by direct, live communication between the lecturer and students (e.g., via synchronous platforms) to clarify doubts, practice, and share digital highlights or notes [12]. Focusing on using small groups, we should refer to the comparative study between Ukrainian and Indian university students [7], which found that only 34 % of Ukrainian students opted for working in groups [7], whereas 58 % of Indian students did so. Also, most of the Ukrainian students stated that they “feel safer online with my camera off” (40 students agree, 19 – neutral, and nobody disagrees) [7, p. 8], which makes any recording problematic.

Some authors suggest asynchronous reading with the use of mobile tools that provide “... effective online learning environment as comprising three core elements: teaching presence (instructional guidance), social presence (peer interaction), and cognitive presence (meaning construction)” [34, p. 517]. Social media is also considered a way to improve reading skills [8] and to support English learning as a whole [22]. The authors from Indonesia have also stated the positive Pearson correlation (0,95) between “students perceptions based on responses to the questionnaire items” and “reading comprehension ability” [26, p. 300].

Systematic review [35] covers the modern field of using AI for learning English, particularly the improvement of reading skills in specialised, AI-controlled dialogue. For example, AI algorithms can be integrated with eye-tracking technology within learning environments. This combination tracks student activities and cognitive stages, mapping their reading outlines and content coverage to accurately predict learning performance and educational achievements [35]. Eye-tracking is also used to study students’ reading strategies and behaviour in stressful situations [33]. In this context, we recall that, according to the works reviewed above and our own pedagogical observations, Ukrainian students avoid using a camera that is on.

Summarising the reviewed sources, we can see that educators identify several challenges to improving reading competences in online mode. Close attention is given to dialogues while reading and to discussions after reading, both oral and written, using special tools or social media. There are many ideas for using information technology to turn the situation to advantage and achieve a more effective learning mode than traditional face-to-face study. But there is a lack of tools that help a teacher while students are engaged in silent reading. Some propositions involving eye tracking face limitations in the Ukrainian educational environment.

Therefore, the goal of this research is to fill this gap and to propose an information technology solution designed to restore pedagogical feedback by tracking reading progress and identifying students who require direct management of their independent work. In line with this goal, the objectives are: choosing a strategy for organising the learning process to improve learners’ reading skills; suggesting appropriate software that helps learners track their own progress while reading; and implementing these methods in the educational process for senior school students.

2. Reading authentic texts: theoretical framework

Modern methods of teaching English suggest many interactive activities using authentic materials to improve reading competence. For example, it can be jigsaw reading, where students read separate text sections, discuss them in expert groups, and teach their peers [2]. In word banks and jigsaw vocabulary, learners analyse text semantics, identifying polysemy and collocations to build flashcards and vocabulary logs [2]. Graphic organisers map complex text structures visually, whilst the lesson plan mix-up helps students analyse and sequence narrative plots [2]. Close reading involves peer paraphrasing of ambiguous passages, supplemented by short written summaries, high-level questioning, and buzz groups to collaboratively evaluate text concepts [2].

Of course, any activity by senior school learners of English using authentic materials must be prepared, because their proficiency level of B1-B2 is not sufficient to use an authentic text directly. So we need to follow some steps before the interactive activity starts, and always take our learners' readiness into account. The analysis of using traditional approaches to adapt authentic texts for school-level learners has been suggested by a Portuguese researcher [18]. His "findings reveal that adapted texts differ from the authentic source with respect to size, while changes at the level of language, such as modifications to vocabulary and syntax, are very rare" [18, p. 199]. Let us itemise possible approaches to adaptation based on the [18] review:

- Structural adaptation: text deletion, text reconstruction;
- Reducing sentence length or rephrasing complex sentences into simpler ones;
- Controlling the introduction of new vocabulary: comparing the text lexis with previously learned;
- Simplifying challenging grammatical content;
- "Elaboration" of the language: adding to the original text some simplified paraphrasing, synonyms, segmentation, and repetition.

Ana R. Luís [18] found no linguistic simplifications in the two analysed textbooks. There were linguistic elaborations and the replacement of some difficult names of entities in 16 % of adapted texts [18].

Discussion of difficult elements of the text, with active participation from knowledgeable students and the teacher, can also help all students master authentic content. From our perspective, such a discussion can serve as an alternative to direct linguistic elaboration in the text. But in this way, the teacher must be dynamically informed about students who need such help and those who can provide it to classmates.

Based on the above analysis, we can design the strategy of using authentic texts in a fully online educational process in English for ordinary Ukrainian senior school students:

1. Choosing the text according to the syllabus for the appropriate topic: the text should be new and interesting for the students; the original text's linguistic complexity should not be too high; the use of the text has to satisfy the copyright requirements.
2. Actualising learners' vocabulary on the chosen topic according to the current textbook;
3. Marking off the lexis in the text that was not studied according to the textbook: comparing two corpora: Corpus1 – the text and Corpus2 – the textbook;
4. Analysing the grammar complexity;
5. Decision making on adapting the text or introducing new vocabulary and explaining grammar in the lesson;
6. Providing the reading and possible discussion on introducing new vocabulary, as well as explaining complicated grammar constructions;
7. Providing discussion on the content of the text;
8. Summarising the grammar and vocabulary.

3. Methodology and using cloud technology tools

3.1. Choosing the text

We planned our empirical work with 11th form students at a village school in Ukraine at level B1. According to the syllabus, the students studied the topic “Science and technical progress. Nature and environment”. According to the curriculum [20] text size for reading assessment should be about 300–350 words for the standard level 11th form students. Training materials size may differ.

The Guardian online newspaper was used as a source of authentic materials because of its native English, objectivity, and good control of grammar. The Guardian continuously analyses and develops its internal vocabulary in line with the evolution of the English language and maintains the “The Guardian style guide” webpage [30]. The Guardian Open licence terms allow the use of citations up to 100 words or “Use of articles in personal, non-commercial blog- and websites subject to: i) a link back to theguardian.com website; and ii) a limit of 500 words” [29]. It is very important that The Guardian state: “You may edit our articles on the condition that their integrity is maintained and their meaning is not changed” [29]. So it is possible to adapt the text if necessary.

Analysing the latest news about the environment, science and technology on The Guardian site, we have selected fragments for learners’ reading that are interesting for modern 11th form students from our viewpoint:

- “Currently, global datacentre capacity is 59GW, so the pace of expansion is rapid and Goldman Sachs expects it to double by the end of 2030. This carries a further infrastructure cost of its own, according to Goldman, with \$720bn of grid spending needed to meet that energy demand” [19];
- The UK’s largest proposed datacentre is understating the scale of its planned water use, according to an analysis. The US operator QTS, which is developing the site, has promoted its “water-free” cooling system as proof of its sustainability.
QTS estimates the two initial data halls will consume 2.3m litres of water annually, according to documents it submitted to Northumberland county council. Yet applying De Vries-Gao’s methodology to the electricity generation required for the site’s AI servers produces a figure more than 50 times higher, at 124m litres a year, according to analysis by Watershed Investigations and the Guardian.
(Adapted from [1].)
- “Tech companies are conflating traditional artificial intelligence with generative AI when claiming the energy-hungry technology could help avert climate breakdown, according to a report¹.
Most claims that AI can help avert climate breakdown² refer to machine learning and not the energy-hungry chatbots and image generation tools driving the sector’s explosive growth of gas-guzzling datacentres, the analysis of 154 statements found.
The research, commissioned by nonprofits including Beyond Fossil Fuels³ and Climate Action Against Disinformation⁴, did not find a single example where popular tools such as Google’s Gemini or Microsoft’s Copilot were leading to a “material, verifiable, and substantial” reduction in planet-heating emissions” [23].
(Internal citations: 1) <https://ketanjoshi.co/2026/02/11/big-tech-greenwashing-report/>; 2) <https://www.theguardian.com/technology/2025/sep/22/ai-carries-risks-but-will-help-tackle-global-heating-says-uns-climate-chief>; 3) <https://beyondfossilfuels.org/>; 4) <https://caad.info/>.)
- National security strategies that fail to take account of the climate crisis are “dangerously narrow”, and will leave countries open to “a new world disorder” threatening famine and conflict, the UN’s climate chief has warned.
Simon Stiell, the executive secretary of the UN Framework Convention on Climate Change, said: “Security is the word on most leaders’ lips, yet many cling to a definition that is dangerously

narrow. For any leader who is serious about security, climate action is mission critical, as climate impacts wreak havoc on every population and economy.”

“Growing greenhouse gas pollution means escalating climate extremes fuelling famine, displacement and war,” he warned.

(Adapted from [11].)

- Bill Gates has called for a “strategic pivot” in the effort against the climate crisis, writing that the world should shift away from trying to limit rising temperatures to instead focusing on efforts to prevent disease and poverty.

Writing on his Gates Notes website¹, the billionaire Microsoft co-founder criticized what he described as a “doomsday view of climate change” which is focusing “too much on near-term emissions goals”.

Gates’s memo comes a day after the UN said humanity had missed its target² of limiting global heating to 1.5C, with the UN secretary general warning of “devastating consequences” for the world.

(Adapted from [9]. Internal citations: 1) <https://www.gatesnotes.com/home/home-page-topic/reader/three-tough-truths-about-climate>; 2) <https://www.theguardian.com/environment/2025/oct/28/change-course-now-humanity-has-missed-15c-climate-target-says-un-head>.)

This text contains 5 fragments, each up to about 100 words.

3.2. Revising vocabulary

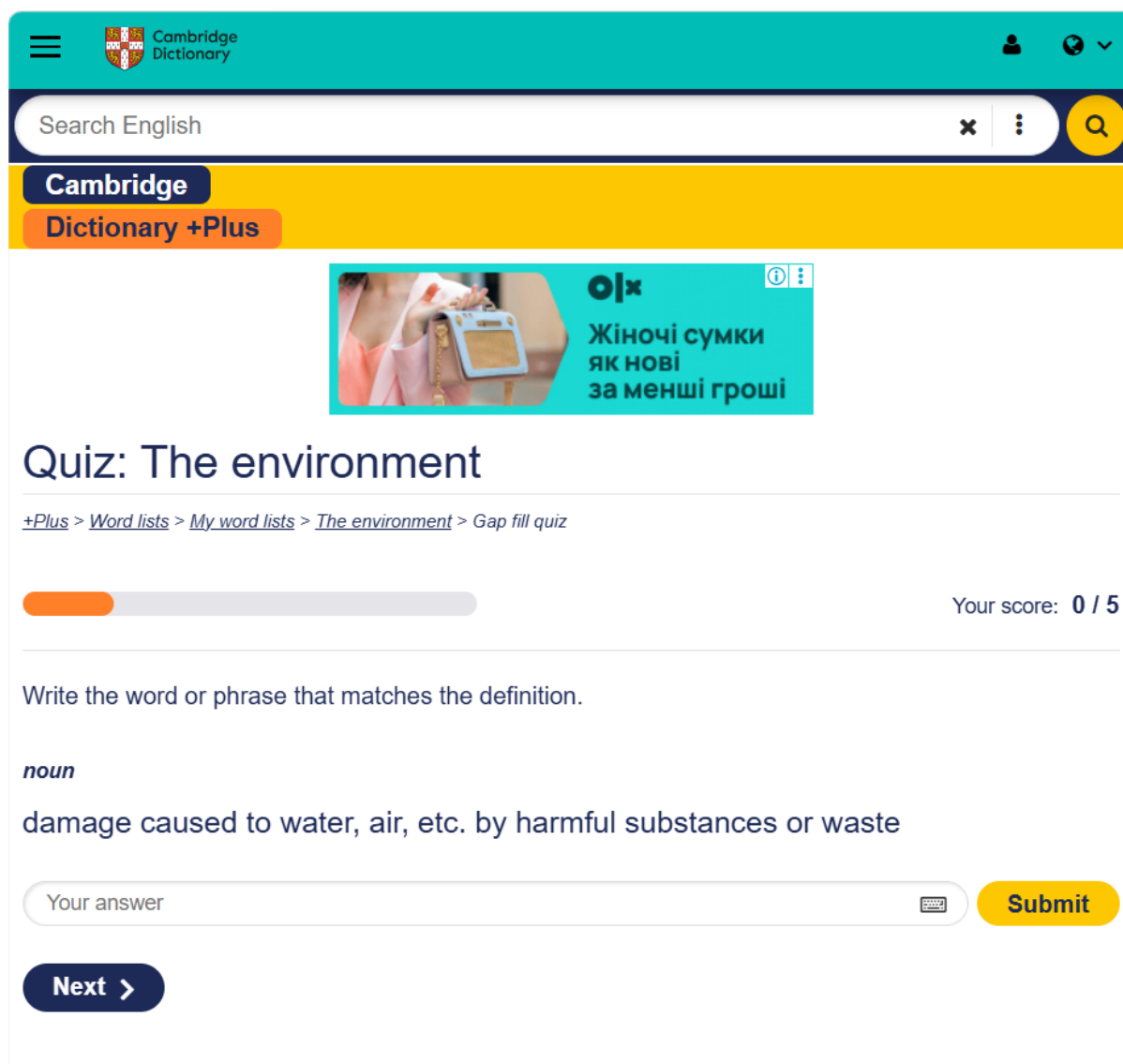
Revising vocabulary should be systematic and personalised for each student. So, the homework with a test-trainer may be the best choice. There are many tools that can suggest short tasks and immediately check learners’ answers. A systematic review of them is beyond the scope of this work, but we need to formulate some pedagogical requirements for a teacher’s choice based on previous analyses [3], [17]:

- Immediate response for each item, showing the correct answer.
- Random repeating items that were not correctly answered.
- Possibility to have a break and continue from the same point at any time.
- Summarising and showing the learner’s progress.

In addition to these main requirements that provide homework realisation of a didactic function of revising vocabulary, some features are welcome for practicality and learners’ motivation:

- Cloud-based software enables the simple sharing of the test with all learners, giving a teacher the possibility to collect necessary statistics on learners’ progress and the test’s efficiency. Such feedback is useful for fixing mistakes in the test and improving its content.
- A simple, user-friendly interface accessible on smartphones and other mobile devices allows a learner to save time, work quickly in a useful place, and concentrate on vocabulary when they have free time, without focusing on interface details. The font size should be large enough to be seen on small screens without eye fatigue. The content of each item should be fully visible on any screen without scrolling.
- Gamification can be a good motivator for learners to complete homework that may not be very creative. There are several styles of gamification. The words being revised may be used in some game scenarios to achieve some game goals. Using multimedia, beautiful design, and performances can increase interest. Another approach is based on the competition and needs in cloud technology for its realisation. Learners can see the record table with the best results in vocabulary. It is important that the middle and worst results are confidential.
- Pictures that help to remember words are welcome. Also, pronunciation support is useful when the system is commenting on the user’s answer.
- Test editor software should be easy for teachers to use to develop each training test.

The simplest way to create a test for thematic vocabulary revision is to develop Word Lists using the Cambridge Dictionary [5]. This cloud technology allows creating, downloading and sharing your own word lists and quizzes for free. The only thing you need to do is sign up with your email. You will automatically obtain correct word descriptions based on the content of the Cambridge Dictionary. But these tests do not allow learners to revise only the unknown words; they need to repeat the whole test if a small part of the words is not remembered. The test interface is reached by additional elements and contains advertising (figure 1). The test items are limited to short-answer questions.



The screenshot displays the Cambridge Dictionary +Plus interface for a word list test. At the top, there is a teal header with the Cambridge Dictionary logo and a search bar. Below the header, a yellow banner reads 'Cambridge Dictionary +Plus'. A banner advertisement for women's bags is shown. The main section is titled 'Quiz: The environment' and includes a breadcrumb trail: '+Plus > Word lists > My word lists > The environment > Gap fill quiz'. A progress bar indicates 'Your score: 0 / 5'. The instruction 'Write the word or phrase that matches the definition.' is followed by the word 'noun' and the definition 'damage caused to water, air, etc. by harmful substances or waste'. Below this is a text input field labeled 'Your answer', a 'Submit' button, and a 'Next >' button.

Figure 1: An example of the Cambridge Dictionary word list test user screen.

Cloud technology Wooflash [32] suggests a wide set of tools for creating test items and supports many useful test forms. AI can help create test items, but sometimes it does not follow test theory requirements; for example, it combines the instruction and stem. The teacher can also develop a test manually. This technology is free and requires registration via email only for teachers. The learners' interface does not contain advertising, provides the button "I don't know", and proposes that learners revise their mistakes with a short version of the test that contains only missed and incorrectly answered items. But such a revision is suggested only once (figure 2). After that, the learner can repeat the whole test.

Brainscape Flashcards Dashboard, powered by cloud technology, provides real, continuous repetition of the word card until the learner indicates that the word is remembered. It is interesting that

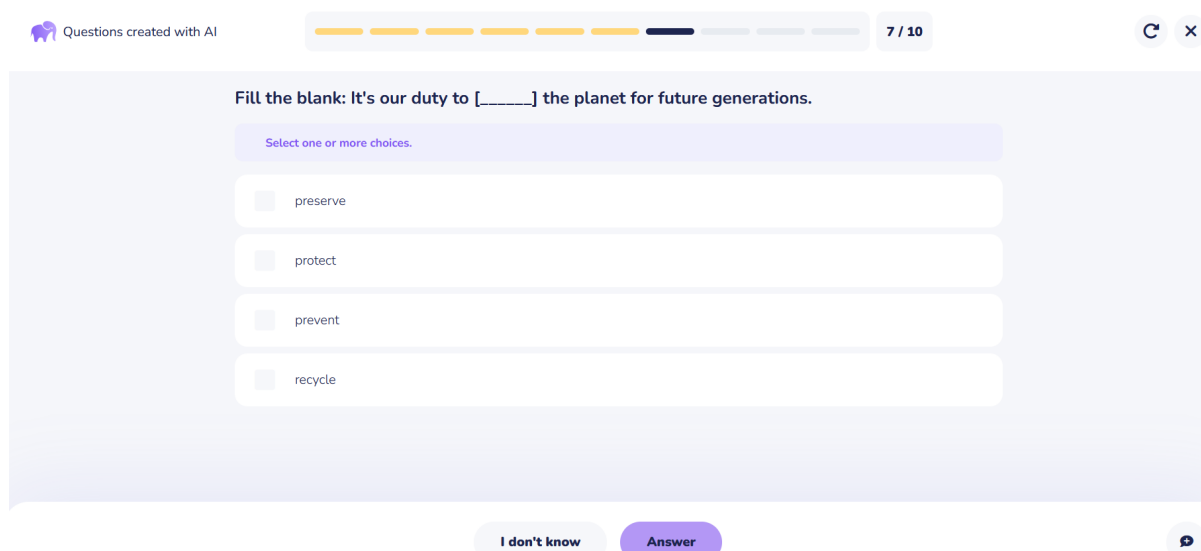


Figure 2: An example of the Wooflash user screen (the stem is based on the Cambridge Dictionary definition [4]).

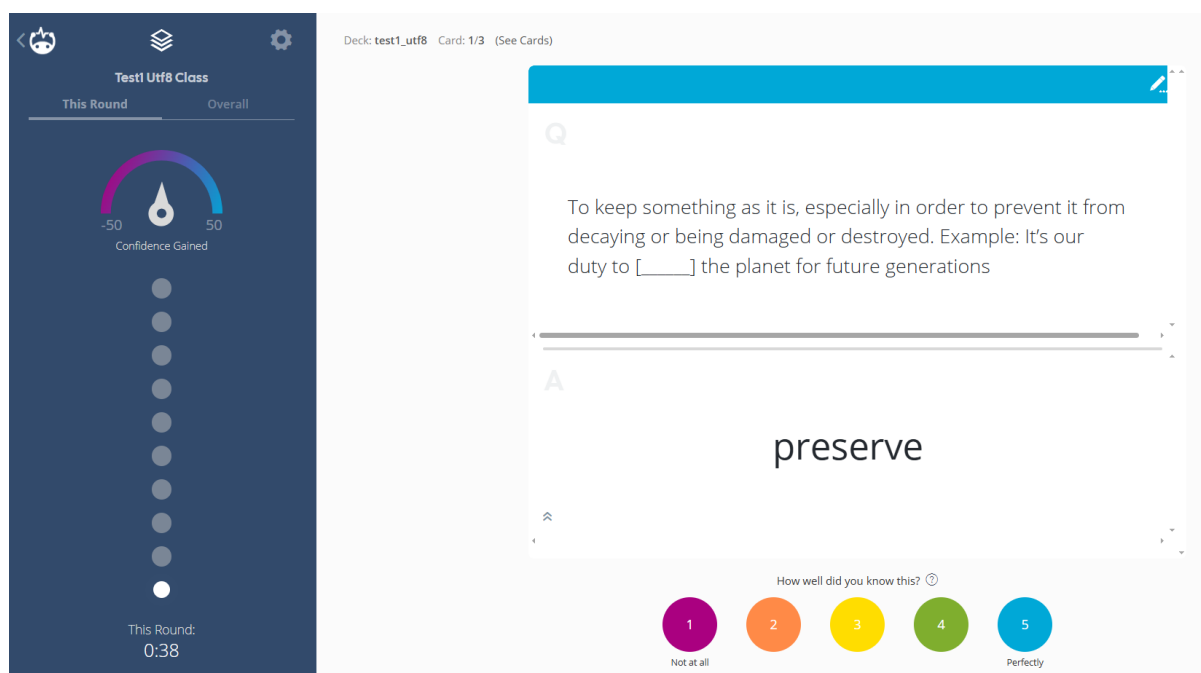
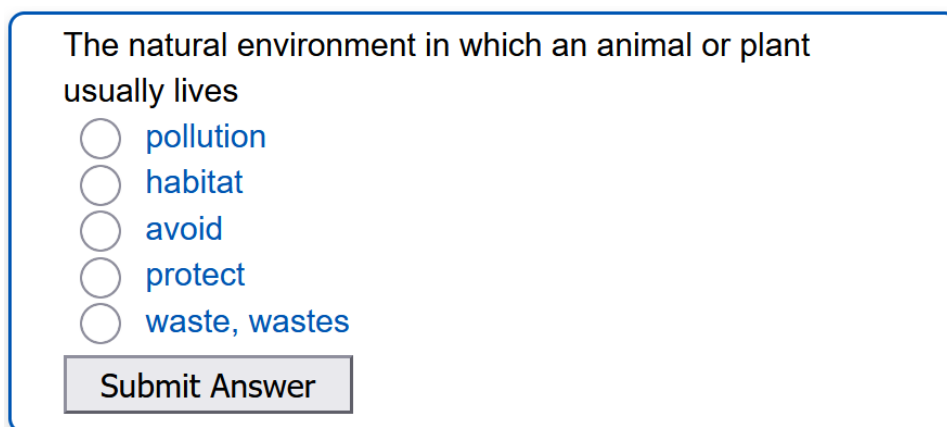


Figure 3: An example of the Brainscape Flashcards Dashboard user screen (the stem is based on the Cambridge Dictionary definition [4]).

this tool suggests that learners mark their knowledge of words themselves (figure 3) without any user input.

The list of possible free tools for revising vocabulary can be continued. Realisation of the testing process is not a hard task for modern programming technology. In addition, there are Internet resources, such as Pythonanywhere.com, that provide free web hosting with pre-installed software for developing an advanced project. Moreover, modern artificial intelligence assistants can help design such software easily. In addition to completing all didactic requirements to achieve educational goals, we need full access to the test result matrix to analyse its quality and obtain the data for our empirical research. We must also avoid any personal learner data in appropriate databases in accordance with Ukrainian laws. So we have decided to create our own cloud software for this

purpose [16] with the help of Gemini AI. The user interface is simplified (figure 4). The correct answer (figure 5) and the summary screen (figure 6) are shown to a user. The words are suggested to a learner until all of them are recognised correctly. The training can be broken at any time and continued later. Registration does not require an email address, or a nickname is enough (of course, the site will not be protected against certain kinds of DDoS attacks in this way, but we use this site locally). The content of the trainer is based on the textbooks [14], [15], Cambridge Dictionary [4], Oxford Learner’s Dictionaries [24] and The Guardian Style Guide [30]. Word selection has been done based on the textbook, according to the topic “The Environment”. All word definitions were analysed and combined by the authors “by hand”, using citations from online dictionaries.

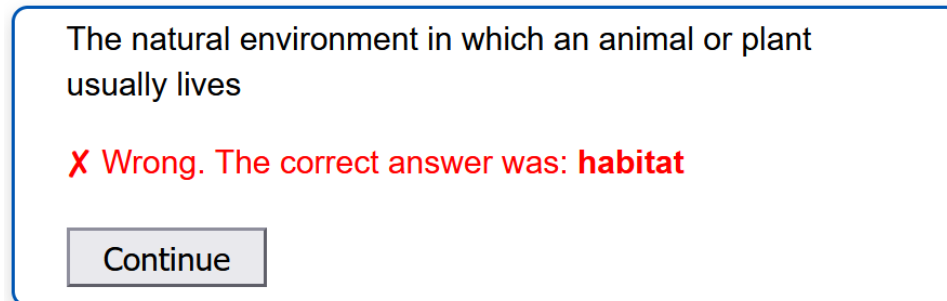


The natural environment in which an animal or plant usually lives

- ☐ pollution
- ☐ habitat
- ☐ avoid
- ☐ protect
- ☐ waste, wastes

Submit Answer

Figure 4: An example of the Vocabulary Trainer user screen: a task (the stem is based on the Cambridge Dictionary definition [4]).



The natural environment in which an animal or plant usually lives

X Wrong. The correct answer was: habitat

Continue

Figure 5: An example of the Vocabulary Trainer user screen: a response (the stem is based on the Cambridge Dictionary definition [4]).

3.3. Corpora study and grammar complexity analysis: decision making

We need to analyse the text prepared for reading for its grammar complexity and simplify it, or be ready to comment on new grammar. Modern approaches to reading assume that learners can guess some unknown words in context, but we should know what words will be new for our students. Also, we need to be sure that such guessing is possible. Therefore, a corpus study of the prepared text, compared with textbooks, is advisable. Of course, some specialised software can be used or created. But known words or collocations can sometimes be used with a new meaning. So an AI analysis will be advisable. We have suggested cloud AI technology Gemini 3.5 Flash (thinking level – Standard) for textbooks [14] and [15] with the such prompt: “Find in the text bellow all the words and collocations that are not used in given textbooks in the same meaning as in the text (LaTeX format): (here the above text was copied)” and we have obtained the three lists.

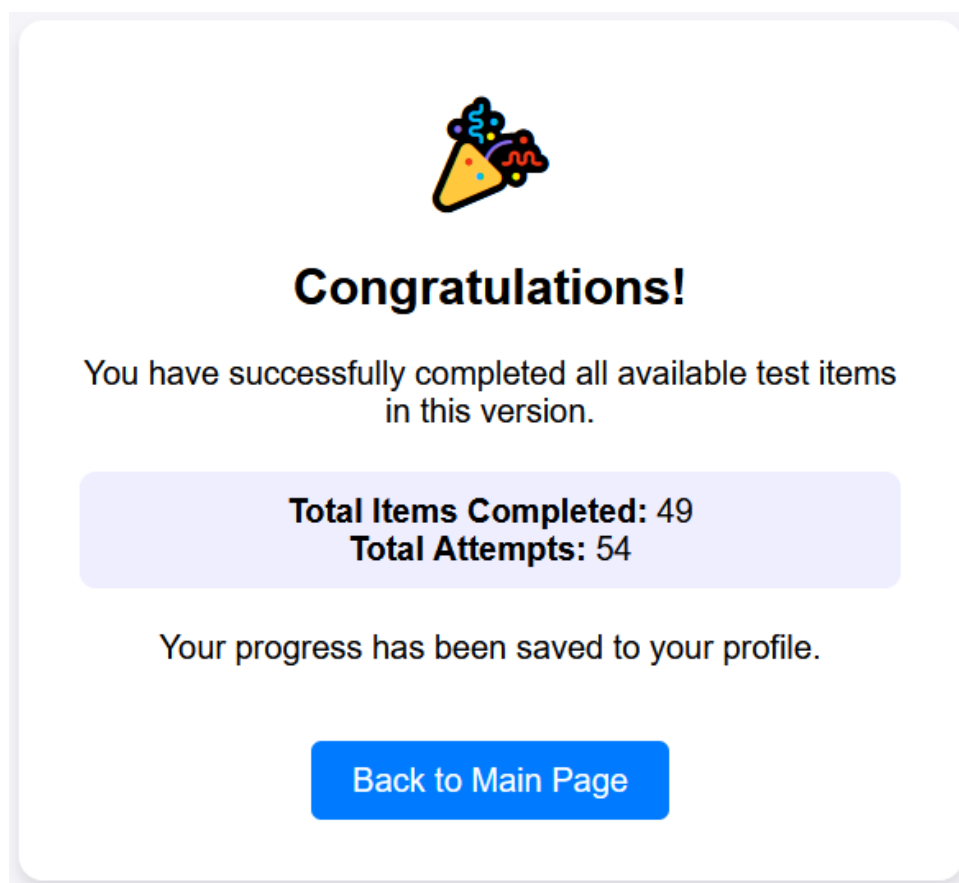


Figure 6: An example of the Vocabulary Trainer user screen: a summary.

The first one contained “Advanced Technological & AI Collocations”. These terms do not appear anywhere in the standard curriculum, as they belong to modern cloud computing, machine learning, and artificial intelligence frameworks:

- datacentre / datacentres — Entirely absent.
- datacentre capacity – Entirely absent.
- data halls – Entirely absent.
- AI servers – Entirely absent.
- generative AI – Entirely absent.
- machine learning – Entirely absent.
- chatbots – Entirely absent.
- image generation tools – Entirely absent.

The second list contained “Energy, Infrastructure & Environmental Policy Terms”. While the textbooks cover basic green vocabulary (e.g., *pollution*, *environment*), they do not contain these technical, industrial or economic compounds:

- grid spending – Entirely absent.
- infrastructure cost – The word *cost* appears in basic financial contexts; this compound does not.
- electricity generation – The word *electricity* appears, but not in this industrial collocation.
- water-free cooling system – Entirely absent.
- water use – Used only in general domestic advice contexts, not industrial metrics.
- energy-hungry – Entirely absent.

- gas-guzzling – Entirely absent.
- planet-heating emissions – Entirely absent.
- greenhouse gas pollution – Basic *greenhouse effect* is taught, but not this specific pollution collocation.
- climate breakdown – Entirely absent; textbooks use *climate change* or *global warming*.
- climate extremes – Entirely absent.
- near-term emissions goals – Entirely absent.

The third list is devoted to “Specialised Vocabulary, Verbs, & Idiomatic Phrases”. These advanced lexical units are either completely absent or used in a radically different common sense within the textbooks:

- conflating – Entirely absent.
- understating – Entirely absent.
- disinformation – Entirely absent.
- strategic pivot – Neither word appears in this advanced corporate/policy adaptation context.
- doomsday view – Entirely absent.
- mission critical – Entirely absent.
- wreak havoc – Entirely absent.
- world disorder – Textbooks focus on positive *international cooperation*.
- material, verifiable, and substantial – This specific legal/analytical collocation triad is entirely absent.
- GW (gigawatt) / bn (billion as an abbreviation) – Standard textbooks use long-form numerals or basic units like *million*.

Of course, a teacher must understand that AI tools can hallucinate (make unexpected mistakes), so teachers should verify this list based on their experience and deep mastery of the textbooks. Moreover, for most students some words as disinformation, chatbot, word disorder may be familiar or easily guessed (based on similarity of terms in Ukrainian or word parts analysis, etc.) while others present real difficulties. The analysis of the newly identified words and collocations, which are new for our students, gives the possibility to conclude that the text can be understood at a level of basic comprehension, but students need additional discussion of the vocabulary for intensive reading.

3.4. Online synchronous reading

We suggest releasing silent reading during online classes, not as homework, because the self-study competence of senior school students is not enough for such a difficult learning activity. Authentic texts contain new grammar and vocabulary; therefore, students need constant support in their effort to guess and understand some fragments. They need communication while reading. Standard tools for cloud communication, such as Zoom or Google Meet, are not enough. It is not good practice for a student to speak loudly into a microphone while other students are reading and need to concentrate in silence. Using a chat takes so much time and distracts from reading. So we need an additional tool for operational feedback from students to the teacher. This must give a teacher the possibility to choose when the reading process should be turned into a discussion. We suggest a simple cloud-based technology [16] that allows each student to highlight some words in the read text with a single click and shows these highlights to the teacher (figure 7). The teacher sees information about students who highlighted words dynamically (figure 8).

3.5. Providing discussion on the content of text

Online classes are very short. According to the medical requirements, it really is about 25–30 minutes [21]. So, the discussion about the content of the read text may be continued in asynchronous

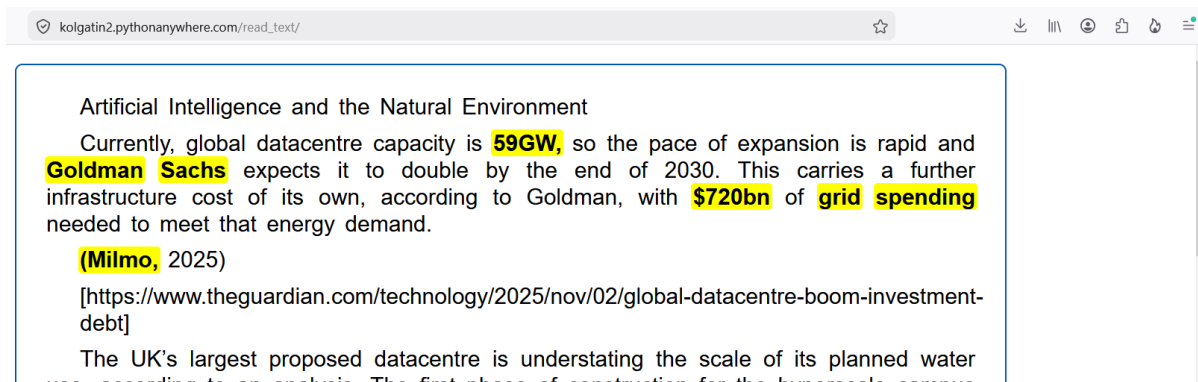


Figure 7: An example of the Vocabulary Trainer student screen: reading.

Слово	Виділили (New Words)	Не виділили
расе	✓ расе	✗ k ✗ N ✗ k ✗ n ✗ Y ✗ y ✗ A ✗ V ✗ s ✗ V ✗ K ✗ n ✗ O ✗ a ✗ k
(Milmo,	✓ (Milmo, ✓ N ✓ k ✓ k	✗ k ✗ r ✗ Y ✗ y ✗ A ✗ V ✗ s

Figure 8: An example of the Vocabulary Trainer teacher screen: feedback information for a teacher.

mode, and we need to use cloud-based tools for this activity. A social media group common to teachers and students may be the best solution for this discussion. Learning Management Systems (such as Moodle) include specialised tools for asynchronous discussions. Sometimes, such a discussion can be organised independently with separate specialised collaboration cloud technology tools.

4. Implementation, results and discussion

4.1. Participants and pedagogical goals

The suggested technology was implemented in the village secondary school of the Kharkiv region. The online classes and homework were optional for students in the 11th form. 6 students have participated, among them 1 boy and 5 girls. The goal of the empirical activity was to extend senior school students' outlook in the fields of technology and the environment, as well as to form competences in reading the new authentic text suggested above.

4.2. Revising vocabulary

Training with the test-trainer Vocabular Trainer [16] was suggested to repeat all textbook [14], [15] vocabulary according to the topic “Nature and the environment”. The test contained 49 items and provided the learner with a correct answer as a response after each learner’s choice (figures 4, 5). The results are shown in the table 1. We see that the students’ groups are highly heterogeneous in both vocabulary acquisition and attitude towards learning. The students V... and N... have demonstrated high mastery of vocabulary. But student N... have not completed the test. Student A... has shown the highest level of attitude towards learning and has really trained until remembering all the suggested words. Students Y... and L... have only opened the test and have not tried to complete it. Such behaviour corresponds to the above literature review and underlines our view that modern students need continuous support and management of their independent work to acquire the appropriate competences. Moreover, we see that some students will have difficulty reading authentic texts not only because of new vocabulary compared to the textbook, but also because of gaps in their mastery of the curriculum. The vocabulary revision step is obligatory and must be supported by all available means of motivation.

Table 1

Results of revising vocabulary on the topic “Nature and the environment” with the 49-item test.

Student	Correct answers	Tried answers
N...	27	37
Y...	1	12
A...	49	184
S...	21	38
V...	49	67
L...	0	0

4.3. Online reading and discussing activity

There were two online classes. The first class assumed basic comprehension of an online reading activity supported with a presentation in a Zoom meeting and the Vocabulary Trainer reading tool (figure 7). Students were asked to read the text and click on any unknown words as they read. Students were asked to click the author’s name after finishing the given fragment. So the teacher could monitor the progress and choose the appropriate moment to discuss difficult words. The process was hard for students because of the short lesson time (25 minutes [21]) and the difficult text. Using the Vocabulary Trainer reading tool helped monitor students’ activity, even to see the activity of the most inactive student, L..., and to involve them in discussion at the appropriate moment.

The second class was devoted to the text content discussion and grammar. The students were asked to find and click on defining and non-defining relative clauses in the text. This grammar topic was previously studied by these students during regular classes. Most of the students were active and clicked on some appropriate grammar constructions; nobody found all of them, and the problem was completed in discussion. In this activity, we encountered a limitation in the teacher interface of the Vocabulary Trainer. The teacher should see all information about students’ progress in the same format as the students do. So the teacher should see the same text with some marks or highlights to provide a quick reaction to students’ ideas. The discussion of the text content continued asynchronously.

Despite the existing problems, we can state that our main idea of using cloud technology to support reading authentic texts in the senior school is robust but needs further development.

5. Conclusion

On the basis of theoretical and empirical research, we can conclude that silent reading of authentic texts is a kind of independent work. Senior school students in ordinary Ukrainian educational institutions need to manage this activity; therefore, teachers need feedback while students are reading. A fully online educational process stimulates the search for new, effective tools and methods to realise this feedback.

We have suggested the approach for providing feedback from students while they are silent-reading in a synchronous online class, using a tool that gives each student the possibility to highlight some words. The teacher can see, in the dynamics, the information about all highlighted words for each student. This tool helps the teacher see students' readiness and problems, and organise the oral discussion effectively.

We have suggested approaches for improving learners' reading competence using cloud technology tools at the stages of preparing, providing an activity and summarising when reading an authentic text. The suggested strategy has been implemented with 11th form students. Our pedagogical observations have shown that it facilitates students' activity, although reading an authentic text is a difficult task for most students.

A small sample of participants is the main limitation of the presented study. The prospect of further research lies in developing a software teacher interface and conducting additional empirical studies across different schools to investigate the particular advantages and disadvantages of the provided strategy.

Author contributions

Conceptualisation and methodology, Nataliia V. Tuchyna; software and empirical work, Oleksandr H. Kolgatin. All authors have read and agreed to the published version of the manuscript.

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Data availability statement

All data that were created or analysed in this study are shown in the text. Additional data sharing is not applicable.

Conflicts of interest

The authors declare no conflict of interest.

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Declaration on Generative AI

During the preparation of this work, the authors used the Google Gemini AI model (accessed February 2026), version 3.1 Flash, for a corpus study of authentic text and as a software development tool.

Grammarly was used for spelling check. After using these tools/services, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

Ethics approval

Empirical work was conducted in native conditions of the educational process according to the curriculum. The classes satisfied all legal requirements, and all data were collected in anonymised form.

Informed consent

No personal data was stored. All activities met the normal conditions of the educational process, were conducted by a teacher who was officially affiliated with the student group, and is one of the authors. No additional measurements were provided except those necessary for the learning process. Reading an authentic text was suggested as an optional component of studying the curricular-based topic. Additional consent was not needed.

Consent for publication

No information about some identified persons or institutions is present in this article.

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