

SRSTI 16.31.51

DOI: <https://doi.org/10.62724/202420202>

Shatalov Anton Konstantinovich*¹,

Master of Pedagogical Sciences, PHPE «West Kazakhstan Innovative-Technological University», Republic of Kazakhstan, 090006, Oral, N. Nazarbayev ave., 208,
wk-shanks@inbox.ru, ORCID ID: 0009-0008-6480-3108

THE IMPACT OF INTERACTIVE ONLINE GAMES ON THE DEVELOPMENT OF LEXICAL SKILLS

Abstract. Gradual increase in the availability of gadgets and computer equipment in schools and universities allows teachers to simplify the introduction of interactive games and activities in the educational process, increasing its effectiveness, when a good balance between traditional and modern teaching methods and techniques is present. This especially affects the development of new and review of long-studied vocabulary of foreign languages (in particular, English), which is shown by the research of teachers from many countries of the world. The article studies both the most popular types of dictionary games, presented to a wide range of native English speakers, and the lesser known, as well as the degree and specifics of their influence on different aspects of lexical skills of the English language students. The results of the monitoring group experiments conducted by the teachers from Asian countries show that the introduction of interactive games in the learning process provides significant improvement for all categories of students, including those whose knowledge before the experiment left much to be desired.

Key words. EFL, language learning, vocabulary development, word games, interactive games, online services.

Introduction. The modern period of development of the society is characterized by a strong influence of computer technologies on it. In Kazakhstan, the digitalization and remote access to all main spheres of human activity – working, travelling, provide distribution of information flows in society became one of the main focus points. Particularly, online availability of such essential for a modern citizen perks as education, medicine and public services is strongly supported and promoted by the governments of C.I.S. countries [1].

Internet information resources and services promote a fundamentally new approach to the learning process, making it possible to realize the potential of new pedagogical technologies. Teachers' appeal to modern Internet resources gives the opportunity to develop students' knowledge through access to extensive information, involvement in search and research activities, which in turn are related to the application and expansion of their language skills.

The traditional ways of teaching are still important for comprehensive development of students' language skills. For remembering lexical units learned recently as well as those learned long ago, simple exercises based on associative memory or standard fill-the-blank exercises can be used, administering the process of vocabulary review both orally and written [2]. There are also multiple suitable forms of vocabulary recollection games classified by different authors [3]. In the traditional sense, the structure of lexical skill includes the following aspects of abilities that students should intend to master:

– Ability to reproduce the lexical unit according to established rules of phonetics of the language. If the learner does not master this aspect well enough, this may have consequences such as distortion of pronunciation, merging several lexical units into one, and inability to recognize the words in another person's speech or audio material.

– Ability to select a lexical unit (in other words, context awareness). The students must be able to choose and use the lexical unit correctly according to the requirements created by the situation. If the students have difficulty with this aspect, then the choice of the necessary word takes more time or doesn't happen at all. This certainly makes further communication or work with information not productive.

– Ability to combine lexical units. The students must be able to work with words in complex. If that aspect causes them difficulties, they won't be able to include new vocabulary units in the previously known grammatical structures and combine them with each other.

– Ability to perform speaking tasks (practically the most important component). It is often the case that the student performs all the operations described above in relation to the lexical unit, but only when talking about it as a separate phenomenon. If a student cannot perform a speaking task, he cannot use the learned lexical unit in the process of communicating in the target language [4].

The formation of these abilities involves frequent multilateral activities to develop and maintain students' vocabulary. When it comes to maintaining, there are multiple ways to revise the vocabulary including such standard methods as testing or reading a dictionary every day, but the ways that involve interactive games and visual elements are proved to be much effective for a modern student [5]. Their use is becoming more and more accessible due to the gradual improvement of equipment in schools and universities, the introduction of interactive boards, projectors and computers in the educational process.

Another weighty argument in favor of the use of interactive and computer technologies in the learning and revising process is that most modern young people are already well versed in gadgets and know how to use the Internet since the early childhood, and the introduction of technology in class easily captures and retains their attention. The students become more active, the task is perceived by them as playing, which increases their interest and mental activity in the learning process, develops logical thinking, problem solving skills and energizes their mind in general. At the same time, to be most effective, any kinds of games should be carefully chosen [3] and mixed with traditional approach. Usually teachers are concerned that it would be difficult to adopt online interactive games as a core part of their teaching process [6].

It is also important to consider that when assessing the influence of any game material on the development of vocabulary, there is a gender factor – male students generally have more interest in gaming, therefore showing more success in learning vocabulary through those means, than female students [7].

Materials and research methods. The research was conducted on the basis of a extensive experience at schools, ELT centres and universities, both as a student and a teacher, as well as a comprehensive analysis of the scientific literature on the topic and possible reasons for the results obtained by researchers (and myself during the years of practice).

For the research, some of the most accessible interactive word games in English were chosen, that could be easily launched on any standard computer or smartphone. The latter is even more convenient, since most modern students have access to them, and the number of people with modern phones usually exceeds the number of those who own a computer.

The purpose of the research was to study these types of games and scientific materials related to them and their impact on the development of vocabulary and communicative competence of language learners, and to analyze which aspects of vocabulary comprehension they affect positively.

The following word games were used as the material of the research (a brief description provided):

– *Wordle* is a web-based word game created and developed by Welsh software engineer Josh Wardle. Taking inspiration and a portion of mechanics from old pen-and-paper game Jotto,

television game show franchise Lingo, and a colour-matching game called Mastermind, he created the game to play with his partner, eventually making it public in October 2021. The game gained popularity in December 2021 after Wordle added the ability for players to copy their daily results. Multiple clones and variations of the game were also created over the years, as were versions in languages besides English. Later, the original was purchased by The New York Times Company in January 2022 to use in the newspaper's Games section. The New York Times version can be found on their official website and can be considered to be for more advanced players and/or language learners, because the words appearing there are rarer, less known, or might belong to a specific industry.



Figure 1 - An example of a solved Wordle puzzle

Most versions of Wordle share the following characteristics: they have a single daily solution, with all players attempting to guess the same word (which creates a bit of competitive spirit), the word consists of five letters, and the aim is to guess it within six tries. After every guess, each letter can be marked with either grey, yellow and green, with grey indicating that the word you're trying to guess does not have that letter at all, yellow – that it is present, but in a different position, while green means that you've guessed it correctly.

– *Spelling Bee* is a word game that revolves around the "honeycomb" concept, where the letter in the central cell must always be present in the guessed word. It tracks the level of player using points, which are counted with the amount of letters in the words found – minimum is four, which gives 1 point, and longer words earn 1 point for each letter.

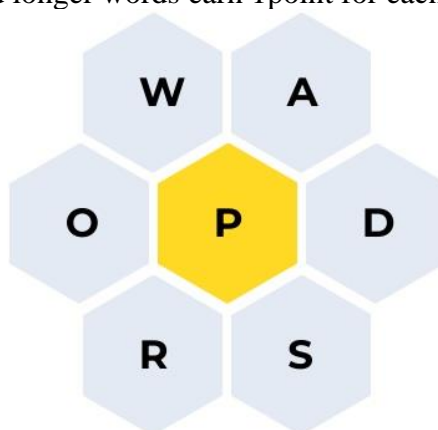


Figure 2 - An example of a Spelling Bee puzzle

– *Word Search* is a game that consists of a square grid of letters. The aim of the game is to find and highlight all the words hidden in the puzzle, which can be placed diagonally, horizontally, vertically, or backwards. The game shows all the available words in the list below the grid, and each word from the list is cross-checked as soon as it is highlighted in the grid.



Figure 3 - An example of a Word Search puzzle

– *Weaver* is a game that has two words (usually consisting of 4 letters). The player needs to transform one word into another by slowly changing letters one by one.



Figure 4 - An example of a solved Weaver

– *Words On Stream* – a bit of an unusual choice here, because it is less accessible to one person and needs a computer or a TV as a base, as well as smartphones. Originally made for the streaming websites Twitch.tv and Youtube, WOS features a word-guessing game that combines cooperative and competitive elements at the same time. In our case, so-called Party mode can be used – the main screen can be on a computer, laptop or an interactive board, and students use their phones to connect to the game (by scanning a QR code on the main screen) and make guesses. The game also bears a bit of similarity to a word tabletop game called Scrabble.

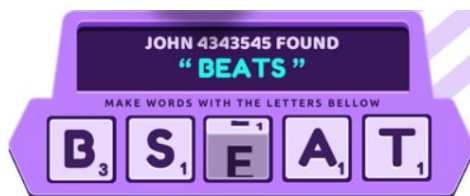


Figure 5 - An example of a WOS letter combination

Results and discussion. With the available research materials and the experience of using the games in the teaching process (as well as recommending them as a supplementary mean of vocabulary review), there were several questions in need of answers. Why these games are good for practicing English? Why specifically English, and can they be used for other languages? How exactly different types and styles of these games affect different aspects of a person's

vocabulary comprehension? In this part I will also include some websites, in which the listed games can be accessed online.

English grammatical endings usually raise the amount of the letters in the word, which is why Wordle can work with the word length. For example, let us compare the word “works” with “-s” ending in Present Simple Tense and “worked” with “-ed” ending in Past Simple. “Works” has five letters and “worked” has six. This means that while trying to guess the right vocabulary unit, it’s mostly impossible to miss the word solely based on its grammatical form. The misses or guesses of the word will be based on its lexical meaning in the majority of cases, like guessing between “work”, “pork” or “fork” with these words meaning completely different things, but differing only in one letter.

Getting back to “works” and “worked”, guessing between them would not be much fun. While the student has already figured out the meaning of the word, which is “work” in this case, trying to guess if it is the present or past tense can. Generally speaking, in languages with more inflections and conjugations than English, these kinds of word games may appear not as effective for practicing vocabulary. Though, that doesn’t prevent Wordle to have versions for different languages, including US and UK English, Spanish, French, German, Russian, etc.

There are quite a few ways to play Wordle, be it online or even trying to guess the word on a piece of paper. The Internet is filled with copies and variations of Wordle, which can be free or paid, simple or fancy by design, and use different vocabulary databases. There are also multiple of those in Google Play shop, but, let us be honest, most people wouldn’t want to install a “free” game filled with advertisements to feed off your online traffic. I’ve tried several of those before coming to conclusion – the simplest choice, that would not make people install anything, is to use the official page of New York Times Wordle ([nytimes.com/games/wordle](https://www.nytimes.com/games/wordle)). A bit later I happened to come across another website (wordly.org).

NYT uses regular 5-letter words. The rules and limitations of English language allow regular 5-letter Wordle to have around thirteen thousand words to choose from for possible guesses. The solution set for NYT Wordle is smaller - only 2,315 words - but that doesn’t necessarily make the game easier, since plenty of words in common usage that people might guess, are simply not included as solutions.

Wordly is not affiliated with NYT, though it uses the same game structure. It’s quite customizable, you can change the size of the word you would like to guess in the range of 4-11 letters, which provides a great flexibility to the English learners – beginners can start with 4- and 5-letter words, whereas intermediate learners can increase the difficulty.

Both games can track user’s statistics, such as percentage of words guessed and distribution of best tries. There are multiple strategies that can motivate language learners to keep more attention to the structure of English language and challenge their own language knowledge. Such strategies may involve trying all the vowels or considering the ending of the word first, with popular ending combinations for shorter words usually being ‘er’, ‘ed’, ‘ss’, ‘th’, ‘al’, ‘ly’, and ‘ie’.

In general, the statistical findings show that using Wordle as a supplementary learning and reviewing activity gives students quite a significant positive output in ability to recognize more creatively designed words, correlate the words in meaning and etymology [8]. The numerous variants of Wordle that can be found on the Internet can further expand learners’ horizons. For example, there are variants, where you have to guess 2, 4, 8, or even 16 words at the same time, or Wordle versions for different franchises and communities (such as Star Wars or Harry Potter). More complicated games like a combination of Wordle and crosswords, or a variant called Phrazle (where you need to guess a whole phrase) can also be used as further means in developing language learners’ vocabulary.

Spelling Bee (spellbee.org) is a bit closer to a classic Wordle in terms of having a daily mode, where everyone has the same base letters which can be used to make as many words as possible following the rules. The webpage has a lot of tips which thoroughly explain the rules and answer frequently asked questions.

This game can be a bit difficult for beginners, but it has several advantages over other interactive language games of online format. First, again, being the daily mode. Since the base for searching words is the same for everyone every day, it is possible to interact with students in different ways – be it simply checking the students’ results separately, which can be done by simply taking a screenshot of the words guessed and can be also applied to distance education; or adding a bit of cooperation and allowing the students to combine the efforts of training their memory and vocabulary (for example, a main screen of an interactive board or a whiteboard can be used to gather all the answers, whereas students use their mobile phones to open the website as well). It is also possible to check the vocabulary from the day before and compare them to their own answers.

Spellbee shows itself as a good way to maintain a level of knowledge of the same root words and their grammar categories (in cases when the daily puzzle has letters that allow making words with ‘s’, ‘er’, ‘ed’ and ‘ing’ endings). In various researches its addition in the teaching process demonstrated a clear improvement in students' lexical skills [9, 10].

Y D E O R S T					
61 words 312 points					
			doddery	redyed	troy
			dory	redyes	troys
			dotty	reedy	tryst
destroy	odyssey	toddy	dressy	retry	trysted
destroyed	odysseys	toyed	dryer	rosy	trysts
destroyer	oyster	toys	dryers	seedy	tyre
destroyers	oysters	trey	drys	sooty	tyres
destroys	redye	treys	dyed	sorry	tyro

Figure 6 – Example of lexical units centered on letter Y (not all possible results are present)

Word Search (wordsearch.io) is a game that is possible to use at any language level, because all that is needed is to put several words on a grid and mix letters around them, which can be done even by teachers themselves. The concept is simple and familiar, sometimes even appearing in Oxford-based workbooks, and with the game system using mostly common words, it is possible to play at any language level to train lexical knowledge and visual perception skills. In this case, all the work is done by a program code, also showing the available words below, which can be directly introduced to the students. This game can be used as a simple warm-up exercise in the beginning or end of any lesson, or a way to keep students entertained and involved in language practicing in their free time.

Weaver (weavergame.org) looks very similar to Wordle, but the process differs quite a bit. The first and the final word are already there, it’s the path between them that is important. The aim is to convert one word into another, by changing one letter at a time. Due to the nature of the English language this is possible with 4-letter words, which are the base of this game. The game stimulates memory by making the player remember words with minimal differences of one letter. Given that the number of such words in English reaches more than five thousand (Note: different sources and vocabularies can provide different results. The upper bound, just based on spelling, is $26*26*26*26 = 456,976$, but of course, that doesn't take into account the fact that most words must contain at least one vowel), the task becomes quite challenging even

for well-versed people. At the same time, it is a good way to update and enrich your knowledge of the words that take a significant percentage of all words in the English dictionary and words used in everyday communication.

Words On Stream (wos.gg/en) features a word-guessing game that combines cooperative and competitive elements at the same time. Every time one of the players finds a word, two things happen – their name and guessed word is highlighted on the screen, and they are not allowed to guess another word for a small period of time, which prevents stronger players to guess all the words on their own and simply win the game by themselves. After a few seconds, the limitation is lifted and the player can continue guessing the words.

The game also has group challenges and level system with increasing difficulty. The better the group performs, the higher the levels can it achieve, with different new challenges such as extra “fake” letters and longer words available. This cooperative element can work in different ways – weaker students are inspired to remember some of the words to guess them in their next try to lift some of the burden on other students and help advance the group’s game level further. Stronger students can avoid wasting time on simple words and go straight for the pangrams (words using all letters presented) and other bigger units.

Being similar to Scrabble, the game allows students to develop skills for recognizing and forming words from the same available letters. In this manner WOS can also be viewed as an activity similar to Spelling Bee, but without a limiting factor of a central letter. That technically allows making an analog game that can be played without any gadgets, as long as all possible words for a particular letter combination are prepared by the teacher beforehand (though, that is limited and doesn’t have any game level advancements). Researches show that Scrabble and other games based on it can provide a significant improvement in vocabulary knowledge [11].

Conclusions. The results of multiple researches show that the addition of the games listed here have a decent positive impact on the development of lexical skills and vocabulary memorization. This can be also caused by these games having a big connection with media and culture (Wordle), or also having a long history (for example, Scrabble was first introduced in 1948). The level of their implementation into the teaching process should be determined by teachers themselves – although it is also great if students show interest in using these games as a nice supplementary activity to practice in their free time. The availability of most of these games, which can be accessed by simply using a mobile phone, or even be replaced by a pen-and-paper variant, allows language learners and practitioners to have a simple and fun way to refresh their vocabulary, with different kinds of games affecting different aspects.

LITERATURE

1 Джумагалиева, М.Б., Абдраупова, Г.Р. Развитие государственных услуг республики казахстан, предоставляемых в электронном виде. [Текст] / М.Б. Джумагалиева, Г.Р. Абдраупова. // Электронный научный журнал «Apriori. Серия: естественные и технические науки» – 2016 – № 1 – 1-10 с.

2 Ибрагимов, Н. Т. Formation of lexical skills in teaching foreign languages (Филология и лингвистика в современном мире): материалы I Междунар. науч. конф. [Текст] / Н. Т. Ибрагимов, Москва: Буки-Веди, 2017. – 81-83 с.

3 Luu Trong Tuan. Vocabulary Recollection through Games [Text] / Luu Trong Tuan. // Academy Publisher: Theory and Practice in Language Studies, 2012. – Vol. 2, No. 2, p. 257-264.

4 Komarova, E.V. Formation of lexical skills in the process of learning a foreign language [Text] / E.V. Komarova // Humanities scientific researches, 2015. – № 2

5 Yuldashova, S.T. Interactive Methods and Effective ESL Vocabulary Teaching Techniques [Text] / S.T. Yuldashova // International Journal for Research in Applied Science and Engineering Technology (IJRASET), 2022. – Vol.10. – XI – p. 889–891.

6 Yip, Florence W. M., and Alvin C. M. Kwan. Online Vocabulary Games as a Tool for Teaching and Learning English Vocabulary [Text] / Yip, Florence W. M., and Alvin C. M. Kwan // Educational Media International 43, 2006 – no. 3 – p. 233–249.

7 Mahmut Kayaaltı. A Literature Review on the Impact of Online Games in Learning Vocabulary [Text] / Mahmut Kayaaltı // International Journal of Scientific and Research Publications, 2018 – Volume 8, Issue 2, p. 312-316

8 Nailul Author Restu Pamungkas. The Effects of Wordle Media on Students' Vocabulary Mastery [Text] / Nailul Author Restu Pamungkas. // JETAL: Journal of English Teaching & Applied Linguistic, 2021 – Vol. 2 (2) – p. 56-61

9 Wedhanti, N.K., Ratminingsih, N.M., Samiyanti, K.. The Effectiveness of Spelling Bee Game through Students' Vocabulary Mastery [Text] / N.K. Wedhanti, N.M. Ratminingsih, K. Samiyanti. // JELTIM (Journal of English Language Teaching Innovations and Materials), 2021 – Vol. 3(2) – p.61-75

10 Dwi Wijaksono. Increasing Students' Vocabulary Through Spelling Bee Games [Text] / Dwi Wijaksono // Journal of English Ibrahimy, 2023 – Vol.2 (1) – p.50-57

11 Jalaluddin Supriadi. The Use Of Scrabble Game As A Teaching Medium To Improve Students' Vocabulary Mastery [Text] / Jalaluddin Supriadi // JUPEIS, 2023 – Vol. 2. – No. 1 – p. 62-67

REFERENCES

1 Dzhumagalieva, M.B., Abdrapova, G.R. Razvitie gosudarstvennykh uslug respubliky kazakhstan, predostavlyaemykh v elektronnom vide. [Development of public services of the Republic of Kazakhstan, provided in electronic form]. Elektronnyi nauchnyi zhurnal «Apriori. Seriya: estestvennye i tekhnicheskie nauki», (2016): № 1. 1-10 s. – (In Rus)

2 Ibragimov, N. T. Formation of lexical skills in teaching foreign languages (Filologiya i lingvistika v sovremennom mire): materialy I Mezhdunar. nauch. konf. Moskva: Buki-Vedi, (2017): 81-83 s. – (In Rus)

3 Luu Trong Tuan. Vocabulary Recollection through Games. Academy Publisher: Theory and Practice in Language Studies, (2012): Vol. 2, No. 2, p. 257-264.

4 Komarova, E.V. Formation of lexical skills in the process of learning a foreign language. Humanities scientific researches, (2015): № 2

5 Yuldashova, S.T. Interactive Methods and Effective ESL Vocabulary Teaching Techniques. International Journal for Research in Applied Science and Engineering Technology (IJRASET), (2022): Vol.10. №XI. p. 889–891.

6 Yip, Florence W. M., and Alvin C. M. Kwan. Online Vocabulary Games as a Tool for Teaching and Learning English Vocabulary . Educational Media International 43, (2006): no. 3. p. 233–249.

7 Mahmut Kayaaltı. A Literature Review on the Impact of Online Games in Learning Vocabulary. International Journal of Scientific and Research Publications, (2018): Volume 8, Issue 2, p. 312-316

8 Nailul Author Restu Pamungkas. The Effects of Wordle Media on Students' Vocabulary Mastery. JETAL: Journal of English Teaching & Applied Linguistic, (2021): Vol. 2 (2). p. 56-61

9 Wedhanti, N.K., Ratminingsih, N.M., Samiyanti, K.. The Effectiveness of Spelling Bee Game through Students' Vocabulary Mastery. JELTIM (Journal of English Language Teaching Innovations and Materials), (2021): Vol. 3(2). p. 61-75

10 Dwi Wijaksono. Increasing Students' Vocabulary Through Spelling Bee Games. Journal of English Ibrahimy, (2023): Vol.2 (1). p.50-57

11 Jalaluddin Supriadi. The Use Of Scrabble Game As A Teaching Medium To Improve Students' Vocabulary Mastery. JUPEIS, (2023): Vol. 2. No. 1. p. 62-67

ВЛИЯНИЕ ИНТЕРАКТИВНЫХ ОНЛАЙН ИГР НА РАЗВИТИЕ ЛЕКСИЧЕСКИХ НАВЫКОВ

Аннотация. Постепенное увеличение доступности гаджетов и компьютерного оборудования в школах и университетах позволяет упростить введение интерактивных игр и активностей в учебный процесс, повышая его эффективность при наличии хорошего баланса между традиционными и современными методами и приемами обучения. Особенно существенно это влияет на освоение новой и повторение давно изученной лексики при изучении иностранных языков (в частности, английского), что показывают исследования преподавателей из многих стран мира. В статье изучаются как наиболее популярные виды словарных игр, представленные широкому кругу носителей английского языка, так и менее известные, а также степень и особенности их влияния на разные стороны лексических навыков обучающихся английскому языку. Результаты экспериментов с контрольными группами, проведенные преподавателями из стран Азии показывают, что внедрение интерактивных игр в учебный процесс позволяет добиться существенного прогресса для всех категорий учащихся, в том числе и тех, чьи знания до эксперимента оставляли желать лучшего.

Ключевые слова. Обучение английскому языку, развитие словарного запаса, словарные игры, интерактивные игры, онлайн сервисы.

ИНТЕРАКТИВТІ ОНЛАЙН ОЙЫНДАРДЫҢ ЛЕКСИКАЛЫҚ ДАҒЛЫЛАРДЫ ДАМЫТУҒА ӘСЕРІ

Аңдатпа. Мектептер мен университеттерде гаджеттер мен компьютерлік жабдықтардың қолжетімділігін біртіндеп арттыру дәстүрлі және заманауи оқыту әдістері арасында жақсы тепе-теңдік болған кезде оның тиімділігін арттыра отырып, оқу процесіне интерактивті ойындар мен әрекеттерді енгізуді жеңілдетуге мүмкіндік береді. Бұл әсіресе әлемнің көптеген елдерінен келген оқытушылардың зерттеулері көрсеткендей, шет тілдерін (атап айтқанда, ағылшын тілін) үйрену кезінде жаңа және ұзақ зерттелген лексиканы игеруге айтарлықтай әсер етеді. Мақалада ағылшын тілінде сөйлейтіндердің кең ауқымына ұсынылған сөздік ойындарының ең танымал түрлері, олардың ағылшын тілін үйренушілердің лексикалық дағдыларының әртүрлі аспектілеріне әсер ету дәрежесі мен ерекшеліктері зерттеледі. Азия елдерінің оқытушылары жүргізген және бақылау топтарымен жүргізілген эксперименттердің нәтижелері оқу процесіне интерактивті ойындарды енгізу оқытушылардың барлық санаттары үшін, соның ішінде экспериментке дейінгі білімі көп нәрсені қалайтындар үшін айтарлықтай прогреске қол жеткізуге мүмкіндік беретінін көрсетеді.

Кілт сөздер: Ағылшын тілін оқыту, сөздік қорын дамыту, сөздік ойындары, интерактивті ойындар, онлайн қызметтер.