INFLUENCE OF COMPUTER TECHNOLOGIES POPULARIZATION ON MODERN YOUTH TODAY AND TOMORROW

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ABSTRACT

Educational process of the past is different from the system which is being implemented at the present time. The reason for this is the change of the set of requirements to the range of skills and competences that future employees should possess. The article compares two generation groups, Generation Z (‘Others’) and Generation Y (‘Millenials’). It explains what difficulties they might have while communicating together. The paper gives grounding for hypertextual perception of reality and ‘nomophobia’ that are characteristic features of Generation Z. The article explains why the youth are responsive on gamification and mind mapping technologies; what problems they have with time management and reading skills and why it is important to implement hands-on technologies into the teaching process.

Keywords: Generation Z. Assessment. Mind mapping. Nomophobia. Hands-on experimenting.

INFLUÊNCIA DA POPULARIZAÇÃO DAS TECNOLOGIAS DA COMPUTAÇÃO NA JUVENTUDE MODERNA HOJE E AMANHÃ

INFLUENCIA DE LA POPULARIZACIÓN DE LAS TECNOLOGÍAS INFORMÁTICAS EN LA JUVENTUD MODERNA HOY Y MAÑANA

RESUMO

O processo educacional do passado é diferente do sistema que está sendo implementado atualmente. A razão para tal é a mudança do conjunto de requisitos para o leque de aptidões e competências que os futuros colaboradores deverão possuir. O artigo compara dois grupos de geração, Geração Z (‘Outros’) e Geração Y (‘Millenials’). Isso explica as dificuldades que eles podem ter para se comunicarem juntos. O artigo fornece bases para a percepção hipertextual da realidade e ‘nomofobia’, que são características da Geração Z. O artigo explica por que os jovens são responsivos às tecnologias de gamificação e mapeamento mental, quais problemas eles têm com gerenciamento de tempo e habilidades de leitura e por que é importante implementar tecnologias práticas no processo de ensino.


RESUMEN

El proceso educativo del pasado es diferente al sistema que se está implementando en la actualidad. La razón de esto es el cambio del conjunto de requisitos a la gama de habilidades y competencias que deben poseer los futuros empleados. El artículo compara dos grupos generacionales, la Generación Z (‘Otros’) y la Generación Y (‘Millenials’). Explica las dificultades que pueden tener al comunicarse juntos. El artículo da una base para la percepción hipertextual de la realidad y la ‘nomofobia’ que son rasgos característicos de la Generación Z. El artículo explica por qué los jóvenes responden a las tecnologías de gamificación y mapas mentales; qué problemas tienen con la gestión del tiempo y las habilidades de lectura y por qué es importante implementar tecnologías prácticas en el proceso de enseñanza.

INTRODUCTION

Only a few decades have passed since the beginning of the massive use of the Internet and the rapid development of computer technology. However, the changes that have occurred in this short time can be called striking. Those few citizens who have not mastered computer literacy and the basics of a global network user are currently experiencing serious difficulties not only in their professional activities, but also in everyday life. The transition of state institutions of the medical sphere, tax and passport services, for example, to partial customer service via the Internet has caused many difficulties and delays in processing the information.

There is no doubt that the future of modern society is in digital technology. This is a fast and irreversible process. Scholars admit that educational institutions have to prepare graduates “to be active and responsible global citizens in a world which is intrinsically digitalised, globalised and multicultural in nature” (O’DOWD, 2017, p. 8). The ever growing capacities of information technologies have reached the point where machines can not only translate texts from one language into another, but even analyze speech functional styles and speakers’ individual peculiarities (MALLYGA et al., 2016; MALLYGA et al., 2019). However, we should bear in mind that not always can computers replace human specialists. There are some sensitive and highly responsible areas which can have a considerable effect on the lives of citizens, communities and entire countries. Take, for instance, the world of law where even slight nuances of translation must be carefully weighed not to give rise to serious disagreements (FOMINA, 2019). No doubt, at present such expertise is still the prerogative of sophisticated specialists. Yet it is undeniable that ITs are conquering more and more space on our planet.

Citizens who are still incompetent in the matter of using a computer nowadays have an opportunity to ask for help from assistants, who will fill out questionnaires for them with personal data or write out a ticket for seeing a doctor or getting another service. A little more time will pass and such computer illiterate people will be perceived as “dinosaurs”, extinct due to the inability to adapt to the new “climatic conditions” of the planet. The state, for its part, is trying to introduce the older generation to the field of electronic services, implementing a number of free social programs for acquiring basic computer literacy skills, thus trying to solve the problem of information inequality. (RETIREMENT AGE, 2019).

HYPOTHESES

Due to dramatic changes of the modern world that are being caused by computer technologies, there are grounds for believing that generations of people who were born before the digital era and those whose birth was recorded and posted on the Internet should have different patterns of soft skills development, of communication, socialization and collaboration with peers and with other generations. When people of different ages have to work together or have to communicate at schools, hospitals and public places there are sure to be certain difficulties of understanding goals and motivation of each other. Since communication is inevitable there should be a set of “tips” or “instructions” of how to make this partnership more effective. When people understand the reasons of behaviour that is different from their own, there is less aggression and misunderstanding, otherwise, people try to demonstrate empathy and become more loyal. Thereunder there is an attempt to describe most prominent characteristics of the modern youth, to give reasons for their peculiarities and to point out the ways of using this knowledge as an advantage for future collaboration.

METHOD

The difference in the pace of computer competencies mastery is noticeable in people belonging to two adjacent generations already. Let me consider two such groups: this is generation Y (Millennials), born between 1984 and 2003, and generation Z (“Others”), which includes the population of the Russian Federation born in the period from 2003 to 2023. The observation method was used to watch and analyze behaviour of people of both genders. Minimum age group under consideration is twelve years old boys and girls. The research is still continuing and younger children are also observed. Though we consider their results incomplete and, consequently, requiring further investigation. The oldest recipients are men and women of 35 years old. The prominent characteristics were obtained experimentally and compared to the findings of the Generations’ Theory abroad and in Russia. We are ready to share some of the major characteristics of these two generations.

The first generation mentioned still caught the time without the widespread use of mobile phones and the Internet, while generation Z has been immersed in the world of accessible and diverse information since its birth.
At the end of the twentieth century, when Millennials were teenagers, citizens still visited public libraries to gain access to the valuable information contained in encyclopedias and rare periodicals. Many people used mobile communications, but did not disconnect the landline phone, since its use was cheaper and more familiar. Reading was considered one of the most common hobbies among educated and creative people. There were clubs for book lovers, where participants chose a literary work, read and discussed it, arranged meetings with writers and recitals. The Internet was already gaining momentum, but was used more for entertainment and was perceived as a pleasant bonus to the already known channels of obtaining information (books, magazines, newspapers, radio and television).

Generation Y has learned to search for information in several sources, evaluate its reliability, analyze the content and form its own attitude to a problem, work or question. Modern youth rarely turns to several sources of information. Representatives of generation Z often do not go beyond the first page of search engines, since all the information they need is already contained in documents that occupy the initial lines of the user rating. The popularity of Internet networks has contributed to the emergence of new professions. SMM managers (Social Media Marketing managers) are specialists involved in creating and maintaining a page on social networks, timely filling it with high-quality and interesting “content”, maintaining feedback from visitors and subscribers of the site, engaging them in activity and maintaining communication. The activities of these specialists contribute to the growth of attractiveness of electronic resources for Internet users. As a result, there is a number of considerable changes in the trends of reading activity among modern youth.

**RESULTS**

**Hypertext**

Reading books has recently been supplanted with looking through the pages of fashionable “bloggers” and watching videos on social networks and YouTube. Teenagers prefer to receive updated and concise information on the topic of interest, rather than follow the mental path prescribed in advance by the author of a classical book. The entire amount of existing information is perceived by their brain as a hypertext, where it is possible to switch from one aspect to another following links and hashtags in any order.

Hypertext is a product of the modern time, of the communication process development in particular. The amount of information is growing every day. The Internet connection is promoting the growth of speed of exchanged data. Different sources of content are connected to each other. It is not a linear structure any more. The links are more complex, they take place in space and in time and remind a matrix, a network, a mosaic. The new text becomes in-exhaustive (ZVEZDINA, 2015). This makes the information flow very attractive for the readers and rather dangerous at the same time as anyone can easily get lost in the maze of information and fail to trace the algorithm of its multidimensional structure.

At the same time, the content of the information page may also change due to the constant addition of new events, data and latest details by the site moderators. As a result, the more often Internet users visit a particular site with updated information, the more opportunities they have to get fresh and diverse news on a topic of interest to them.

Given the peculiarities of hyper textual perception of information by young people and their desire to create their own works on the web, it will be advisable to develop educational portals, and to unite pupils, students in communities according to the level of knowledge, the topic of the project / research or according to their interests. The main form of the works’ presentation may be an essay, a composition, a fanfic on a prearranged topic, but teachers should try not to limit students to the precise framework of the structure and genre so that they feel free to be creative and to build their own hyper textual algorithm while fulfilling the task. It is necessary to update the information on this site regularly, add useful links and assignments such as a Case study or Dilemma decision that will provide freedom of choice and self-expression for modern users of Generation Z.

Spending much time in front of computers or using cell-phones modern youth develops a constant need to visit information sites, which, in turn, forms a steady reflex or habit, which soon develops into a psychological dependence. Some of the Internet users get used to the feeling of keeping in touch with the global informational database and it becomes a constant demand, an addiction. If such a person is deprived of the opportunity to access the Internet and receive updated information, he experiences anxiety and irritation, which is one of the manifestations of the disease called “homophobia” (fear of being left without the Internet and mobile communications) (FEARS AND PHOBIAS, 2020).
Nomophobia

The term comes from the English expression “no-mobile-phone-phobia” and was coined by British research in 2011, which measured the level of anxiety produced by mobile phones in a sample of more than 2,000 people. The report of the research states that there were more than 50% of the examinees who manifested anxiety when they thought they lost their cell phones. (NOMOPHOBIA, 2017) As teenagers usually spend more time texting friends, surfing the network, watching videos and playing games, they are considered more prone to “nomophobia”.

Many parents and teenagers themselves have already realized that mobile phones addiction is a negative phenomenon which reduces the quality of life and harms their health. Consequently, they have become concerned about how to get rid of this ‘bad habit’, the Internet addiction. There is no doubt that the cyberspace has become our lives reality and one of the peculiar characteristics of the generations of our time. We can also observe the difference in the attitude to the problem and the means of solving it.

Where there is a need, there is a demand. And as soon as there is the demand, the supply develops. For those who are concerned about time spent online, using different gadgets, there are already some “useful” applications that are supposed to help the users to control their time better, to use it more productively and to spend less time checking messengers and commenting photos.

Nowadays there are various apps, such as QualityTime for Android and Moment for iOS, that inform you how many hours a day you are spending looking at a screen. The results could be disappointing. The truth is that generally people make a series of mini checks of their social network accounts. They may not feel like much, but they add up quick. Thus, there are programs that control your time online and set up phone restrictions. There is also advice to get yourself a real alarm clock if you want to use your gadget less. The fact of the matter is that nearly all the cell-phones have an integrated alarm clock in them. Consequently, many of us keep the phones close to our beds all night. ‘And that means checking it until you fall asleep, waking up to texts at 2AM, and browsing again the moment the alarm goes off...So get a real alarm clock and leave your phone in another room while you sleep.’ (STEBER, 2016).

To avoid using the phone at the mealtimes and leaving this time for live socialization, there is a simple “game”. Put your cell-phones in one bowl and try to ignore the messages and calls. The one, who first picks up the phone, will pay the bill for the whole company. As practice shows, there are very few people who dare to brake the rule. Although there could be a significant drawback of the initiative: people may start avoiding live meetings and having meals in a company with such rules.

Another advice is to switch off all the notifications so that to suppress the wish to check the phone every time you hear a beeping signal. Those who want to get rid of their telephone addiction should also set up phone-free times. It will help to concentrate on what you are doing and eliminate your phone as a distraction.

There is an even more radical piece of advice: you should delete the most time consuming applications. If it is too difficult, you should sign out of the application every time you have finished using it. It will create certain difficulties when you wish to visit the site again. That is how the telephone experience will become more meaningful.

Gamification

Modern society as a whole and the youth in particular have also developed the “action-encouragement” reflex. The need for an immediate reward for the performed action arises during a frequent process of playing computer games, where the character’s movements are based on the principle of collecting points and getting the score for it. The result of the actions taken is instantly displayed on the screen. Successful steps lead to an increase in the number of lives, an improvement in the game’s characteristics of the character, obtaining bonus points and other rewards. Failures instantly deprive the player of a chance to continue the game, threaten the loss of points, items of the arsenal, etc. The same principle of approval for certain actions is the basis for receiving “likes”1. This mechanism of positive encouragement and negative punishment is also described in pedagogy and psychology. It gained a foothold in modern society due to the introduction of elements of a computer game

1The “Like” button is a function in communication software designed for social networks, blogs, online forums, social bookmarking services, news sites, which is used to express the attitude of users to this or that content... the button... is needed for socialization of the website: the object marked with it is embedded in the social graph and interacts with other nodes of the graph (for example, friends of the user)...

Sometimes sites have a “dislike” button... to express disapproval of the content of the web or its root page element (WIKIPEDIA, 2018).
into processes that initially had nothing to do with it. For example, a system of collecting points on store accumulative cards with the possibility of their subsequent utilization; or providing a fifty percent discount for the quick payment of travel fines.

This phenomenon was called “gamification”, which means “the process of using game thinking and game dynamics to engage the audience and solve serious problems.”[WERBACH; HUNTER, 2012]

By publishing news or ‘a story’2 on a page in the social network, its author is waiting for an instant reaction, ‘likes’ and comments. This model of information exchange is the most common among modern youth. Therefore, when there is a decrease in learning activity on the part of a teenager associated with the lack of motivation, this means that he is no longer satisfied with a familiar mark.

“Easy gamification” is unrelated to a specific game, it borrows its features. Elements such as competition, ratings, medals or points can be added to the daily components of the learning process. This idea is simple enough to implement.

In such cases, it is necessary to personify the approach to the student, to provide an instant assessment system with the introduction of elements of encouragement and punishment in the form of raising / lowering the status of the student (beginner, proficient, expert). It is also effective to leave a personal comment on the student’s work (for example, after an essay written by him). This innovation will revitalize the “student-teacher” relationship, will contribute to the growth of the teacher’s credibility and enhance the motivational background of students.

Mini-quests inscribed in the outline of the lesson can also become a modern solution for the development of non-standard thinking and initiative of students. This may be a small adventure, which is impossible without some grammar or vocabulary tasks.

For example, a grammar lesson can be started as follows:

“Today we are going to travel across the See of Grammar. Our ship is called Present Simple. We need to follow the route marked on the map. Only if we manage all the tasks and overcome all the difficulties on the way we can reach the mainland and come ashore.”

The next task is to get directions to the Islands - Cases of the Present Simple Tense Use. Among them should be the following items: Regular action, General truth, Laws of nature, Timetable. On these islands, the crew will be able to replenish supplies of water and food with the correct implementation of simple tasks. But among the islands there are also those that do not match the use of Present Simple completely. These are pre-prepared traps for students. For example, the island of Action, Happening at the Moment of Speech, which you can leave only if you separate the state verbs from the action verbs correctly.

These creative tasks must be interesting and understandable to modern adolescents, since the techniques of gamification, problem solving and teamwork are elements of many modern computer games. If you partially use them in the lesson, you can observe an increase in student motivation and involvement in the learning process.

The successful introduction of elements of gamification in the classroom at schools and universities has led to the formation of a separate gaming market. More and more manufacturers of computer simulations are developing games specifically for education. An example is MinecraftEdu and Simsity Edu, which introduce students to the suburban infrastructure. It was found that the more difficult the topic is, the more elements of gamification it should contain. Psychologists have repeatedly noted that the modern education system is focused on applied knowledge and does not contribute to the development of leadership skills, sociability, teamwork, cooperation and negotiations. Incorporating elements of gamification into a lesson plan will help solve this problem.

**Time management and mind mapping**

Many teens belonging to Generation Z have never kept a school diary and did not place their schedule with the exact daily routine above the desk, unlike children of earlier generations. It is becoming more difficult for modern youth to plan their activities effectively. As my personal practice shows, ninety percent of students almost never use the Organizer application on their smartphones. They are unfamiliar with the process of prioritization, task

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2This is a feature on Instagram, one of today's popular social networks. "Stories" allow you to upload videos from fifteen seconds to one hour long, as well as not the best photos that you don't want to post on your page for a long time. The system deletes them after 24 hours if the author of the publication does not consider it necessary to save it in the archive.
setting and reflection, introspection. The randomness in planning leads to a general lack of comprehension and distraction of thoughts, lack of concentration and memory problems. Subsequently, there are cases of anxiety, which lead to disorders of the nervous system and sleep disturbances.

Meanwhile, at the moment, we can observe an increase in demand for consultations on time management, that is, a rational distribution of time when performing any task and self-organization throughout the day. The Mind Mapping technique, that is the use of mental maps, has appeared recently and is becoming increasingly popular. Various courses and consultations on this topic “upgrade” the brain, taking as a basis the well-known principle - “make our brain work fast, run it to the fullest extent, or even ‘cheat’ (HABR. DEVELOPER SOFT BLOG, 2015).

The first book describing the technique of mental maps was published in 1974 - “Head-to-Head” by Tony Buchan. Almost 50 years have passed since the first mention of the process. The beginning of the twenty-first century marked the growing popularity of Mind Mapping around the world. Judging by the number of requests on the network, countries such as Indonesia and Thailand have become leaders in this. Russian statistics is slightly different. Only in 2011, this technique began to gain popularity in our country. Perhaps, it was from this year that it became clear that the usual technologies of storing, visualizing and organizing information did not cope with their task. It could also be that this period coincided with the marketing activity of companies promoting the product.

This technology is based on the mechanisms of recording information, its storage, easy access to recorded data and analysis. The map is built according to the radial principle: “the key image is in the center, and further branches diverge from it.” Simplicity of data presentation and accompanying visualization improve the perception of information. The efficiency of perception of textual information, backed by images, increases on average by six times.

At its core, this technique does not contain information that we would not have known about before. This model reminds us of the “well-forgotten old”, of tables and diagrams, of schemes and algorithms that were widely used in education at the end of the last century. In the context of modern computerization of society, there is an increase in the flow of information. With the popularity of the Internet, due to the abundance of data sources, a clear structure of the resulting images is lost. “Information noise” contributes to the separation of neural connections and the loss of the skill of processing and analyzing data (POPOVA, 2017).

**PISA research**

The described problem is beginning to take on a global scale. A decrease in the ability to perceive and process information efficiently is observed among the younger generation all around the world. The trend has become so noticeable that official statistical and estimation services took up monitoring of this issue. To date, there are several such initiatives, one of which is PISA (the Program for International Student Assessment). It is held once in every three years; started in 2000 and held under the patronage of the Organization for Economic Cooperation and Development. The purpose of this large-scale testing is to assess the literacy of 15-year-old schoolchildren in different types of educational activities: science, mathematics, computer, and reading.

Russia’s performance in the international ranking of countries whose students passed PISA testing is still rather low [Gazeta №195, 2019]. According to experts, the leading positions in this assessment system show “countries in whose education is practice-oriented” (ROSSIYSKIY UCHEBNIK, 2018). As for our country, it is at the stage of restructuring for this type of training. The new format of tasks for assessing reading literacy in 2018 included “tasks with hyperlinks”, for which you must be able to work with a computer in addition to reading skills.

Even though the students of Generation Z are keen on computers, surf the net freely, don’t have any difficulties with expressing and supporting their point of view and building their own hyper textual reality, they usually cannot use the clues of the context of a simple text with the task of ‘filling the gaps’. It seems that ‘jumping’ from one page to another, following their own logic of thinking, should help to develop the skill of seeing the connection between the documents, pages, ideas, etc. But virtually it doesn’t help at all. Instead of setting thoughts in order it blurs the logical connections and distracts the process of building associative links between different pieces of information. As a result, we see degradation of the performance at humanitarian subjects at schools and universities, especially if it concerns reading. Below we are drawing an example of a task which could be included in the PISA testing to check skills for reading and processing information from a non-linear text, represented in a form of a pictograph:
Figure 1. Online study tools


Look at the info-graphic text and answer the following questions:

1. Which online study tool will fill the room with pleasant sounds to reduce street noise?
   Answer: Noisli

2. Which online tool can help you with more than three subjects?
   Answer: Mathway

3. Which application(s) has minimum design to prevent distraction?
   Answer: Calmly Writer, ZenPen

4. Which application was created with the help of ordinary people?
   Answer: Power Thesaurus

5. Which application(s) can help you at the stage of ideas generation before starting your project?
   Answer: Padlet or Lino

6. Which online study tools may be useful for students when getting ready for a written exam?
   Answer:
   - Minimal writing tools: ZenPen, Calmly Writer
   - EGG Timer
   - Cloud Storage tools
   - Writing reviser

7. Your friend has problems with time management. Which applications from the list will you advise him/her to download?
   Answer:
   - EGG Timer
   - Timetable
   - Start.me
   - Tick-Tick and Wunderlist
8. Imagine the situation: you open the laptop of your friend. You see that he has recently downloaded a number of applications. They are WRITING REVISER, BIBME.ORG, DROPBOX, WUNDERLIST. What could be the task he/she has been recently doing?

Answer: perhaps he/she was writing an essay and tracking time for better time management.

As it is clear from the typology of the tasks, there are questions that require simple skills of searching reading, where the student should be attentive to details and specific information; such tasks are usually given at the beginning of the set of assignments. Further in the task we provide the elements of problem solving and partial research (question 7). And finally, there should be a task which will go beyond the information, given in the text; it should check the ability of a student to make logical assumptions, to apply the acquired knowledge to real life (question 8).

The task was offered to teenagers at the age from 13 to 17 years old who are learning English as a foreign language, 30 students altogether. The level of language knowledge varied from pre-intermediate (21 student) to upper-intermediate (9 student). All children solved the tasks on searching reading. Some of the students were quick at finding the information (15 boys and girls), some of them needed some more time for finding the right information (15 children). Questions 7 and 8 took more time and caused some difficulties with the elder students (10 students). Giving their feedback of the task the 17 year-old teenagers complained about the nontypical tasks and unusual logic they had to use. Younger students also singled out this peculiarity but fulfilled the task 10% quicker than their elder schoolmates. The experiment proves that there are differences in mechanisms of information perception among teenagers of nearly the same age group. It is safe to assume that the larger the age gap, the more dramatic will be the inequality of data processing.

**Hands-on experimenting**

For most people of the modern world all the technology they are using every day is a complete mystery if they brake. They cannot test them, take apart or fully understand. There is a great disconnection between the notion of a profound user and a man who really understands how the device works. Most of us have never replaced the battery of their cell-phones. The majority is really afraid of opening the device in order not to break it.

This entire modern technological world is preventing us from experimenting. Firstly, toys for children are becoming more and more sophisticated and more expensive to let the kids break it apart to see what is inside. This is one of the aspects. Secondly, parents have changed children's perception of the world being too protective to them at the playground, at walk, at home. They are suppressing children's curiosity and initiative, their instincts of investigation. As a result, the youth of Generation Z is keen on how to use the device, but will panic if there is no internet connection or the battery is flat.

One of the scientists, who is an experimental physicist, states that there is an opportunity to reconnect to our devices by doing more hands-on experiments. It will help to figure out how things work in this world. “Looking things up in the internet does not work in the same way” (MASON, 2020)

Recently I have been to one of the educational exhibitions where people from all spheres connected to teaching students were discussing topical problems of the process. Surprisingly, teachers and methodologists of different humanitarian and natural sciences agreed that there should be more experiments and more practice at their lessons because students cannot proceed with the more complicated topic of the subject if they lack the basic knowledge of how the world works. They also agreed that it is better to implement a meta disciplinary cognitive approach to explaining a range of essential mechanisms. They stated that students should not be afraid of experimenting, taking things apart and reconnecting them.

As a linguist I can recommend a set of exercises that help experimenting with the words in order to realize the linguistic processes better. There are also several suggestions of how to make the exercises more understandable thanks to drawing parallels with the physical world.

One of the most difficult linguistic processes to explain for students is word-formation. Many teachers draw the parallel to the mother tongue; try to give a list of morphemes and their relation to different parts of speech. Therefore, the process is not clearly understood until drilled and practiced many times. To make the explanation more entertaining and easier to realize it will be a good idea to compare it to one of the hands-on processes, for example, cooking a cake or a salad. The lesson could start like this:
• First, the teacher presents all the ingredients for the salad: tomatoes, cucumbers, bell pepper, soft cheese, olive oil - all familiar to every one of us. Then mixes them all in a bowl and gets a new dish, Greek salad. Then the teacher draws a parallel with the word-formation process. For example, the word “unforgettable” consists of the prefix “un”; which means “not”; of the root “forget”, which means “to be unable to remember the fact”; and of the suffix “-able”, meaning “having the necessary skill or characteristic”. If to connect them together, we will get a new unit, an adjective “unforgettable”, meaning “extremely beautiful, enjoyable or unusual, so that you remember it for a long time”.

• More than that, you may draw attention of your students to a particular order of the components or “the ingredients”: first comes the prefix, then the root and it is followed by the suffix. This succession is of great importance, just like the process of making latte layers, for instance.

• Another example of a linguistic task where students need to restore the order of letters in a word, words in a sentence or sentences in a text could be associated with the real life experience and hand on processes of assembling a jigsaw puzzle or a Lego construction kit.

Most significantly, the process of connecting a verb with a preposition into a collocation with the transformation of the components’ meanings into a new one, just like it happens with the verb “give” and the preposition “up” connected in a structure “give up” with a new meaning “stop or refuse doing something”, could be compared to a process of mixing paints: if we take a blue tone and a yellow one, we will get a green color.

These examples taken from the real life experience of your students will accelerate the process of understanding, will hold the attention of your learners and are likely to improve both practical and linguistic skills. It will also increase their motivation to studying and help to make the picture of the physical and linguistic world complete. Parallels to hands on experimenting at the stage of explanation help to awake and to build the neuronal connections of the brain, make the process of education more cognitive and effective.

**Discussion**

Computer technologies have penetrated almost all spheres of our life. Those who are not digitally literate are unlikely to find a well-paid and prestigious job on the modern labor market. There are subjects in school and universities curriculum where students are taught basic computer skills. Industrial Revolution 4.0 is closely connected with robotics and automation of monotonous and routine tasks. It goes without saying that employees of the future should be keen on computers.

Modern youth seems to be very keen on technologies but has difficulties with critical thinking, time management, practical skills and personal communication. In future generation Z will have to blend in a team of colleagues of generation X and others. Employers are also concerned about the way of efficient interaction with their subordinates. They are looking for perfect team players for making their staff performance even more productive. It is obvious that new standards’ implementation will need skilled and intelligent work force. Thus, it is essential to learn more about your future employees at the moment already. To ensure the desirable result and to avoid possible mistakes it is advisable to use methods and technologies which are more understandable for the coming generation; rely on the strong sides of the youth and try to develop them in order to bring up a new, smart, and efficient generation of young specialists. Among these effective techniques it is advisable to rely on hands-on educational teaching technologies, use elements of gamification and competition, develop skills of time management, critical thinking, research and experiment, apply mind mapping at the stage of processing information. All these details will help different generations, who are meant to live and work together, to cooperate and collaborate more efficiently.

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