Original Research

Towards synergetic combination of traditional and innovative digital teaching and research practices

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The paper pursues three objectives: to try and define key features of the digital environment which shape modern educational strategies; to specify how they can promote emerging innovative up-to-date teaching/ learning practices if combined with conventional teaching; and to analyse the search and research potential of digital engines for teaching/learning and for linguistic research. The methodology the author relied on in the research was to study the portrait of the modern learner and build the educational approach on it which was designed to combine conventional and digital methods. The digital paradigm shapes the educational platforms and introduces dramatic changes into conventional teaching/learning practices to offer a healthy combination. For instance, it makes teachers reconsider the concept of active learning and reshape project-based learning, rendering project activities more practically oriented; or rely on few-shot learning, as this format takes into account the changing cognitive patterns of the millennials who have a shorter focus of concentration. The availability and accessibility of abundant Internet resources has a strong demotivating effect on youngsters' attitude towards hard learning, especially training their ability to memorise and to concentrate. The results of the study and applied approach revealed that students compensated for this by improving their creative potential and higher reactivity, which can be triggered by few-shot learning. Information resources can also contribute to research practices and add to the students' creative approach to research practices which is demonstrated by the sample template offered in the paper.

KEYWORDS: *digital, search engine, research engine, active learning, few-shot learning*

1. INTRODUCTION
1.1. Digital educational environment – a blessing or a curse?

The paper will briefly tackle, first, the global context of the digital revolution projected onto the rapidly changing educational environment; second, characteristics of the younger generations, millennials, which directly impact their educational trajectories and preferences and must be taken into account in planning our teaching; and third, the essentials of the teaching strategies which help to cope with the first two realities and find some

synergetic combination of the two. To illustrate how the suggested approach is implemented, sample templates from actual teaching practices will be offered. In doing so, the teaching/learning and research potential of digital resources in teaching humanities, and specifically in teaching translation, will be assessed.

One of the key features of the contemporary world is that it is facing unprecedented dramatic changes which define the present-day reality, the educational environment included, as it is sensitive to innovation to the utmost degree, being the field where dynamic individuals belong. The digital revolution is defining the world in all spheres of life. It radically changes the educational frame, transforms the focus of the learning trajectory from listening to the teacher and memorising facts, figures and argumentation to arming the learner with the tools that help students – as would-be professionals – get practically efficient and wanted by society. True it is that the changing social environment requires a different kind of person who can meet new challenges, otherwise the younger generations – generation Z, or digital natives, or centennials – will have to face an evolutionary cul-de-sac. It is even more true that the teaching staff has to also face the new frightening reality as it is their responsibility to arm the students and prepare them for successful professional careers.

The contemporary digital world offers unprecedented opportunities as regards availability and accessibility of information resources. It makes life much more dynamic, comfortable in all respects and more enjoyable. We are all taking advantage of digitalisation in our everyday life and mostly treat this digital revolution as a blessing, though we do give full account of the dark sides of the process.

In this context society, for example, is getting more and more worried about youngsters' dependence on gadgets. If we look at it from a more positive angle, we have to admit, though, that humankind is not degrading, it is simply getting different. Now we can get information actually 'out of the air'. People do not need to memorise facts and ideas which we are not likely to use even once in

a lifetime. No more need except to practise memorising just as an exercise for the brain (Konstantinov, 2018). One of the key skills youngsters are practically born with (reflected in the term they are often referred to as – *digital natives*), their alter ego is their ability to mine, or dig out necessary information the very moment they need it. We have to admit, though, that mental resources are not limitless (Konstantinov, 2018) and if people thoughtlessly spend them on mastering gadgetry it can shake their cognitive balance and the available brain resources cannot be saved for other – often more relevant – activities. Scientists (Konstantinov, 2018) claim that this precarious balance shift calls for special investigation.

What we treat as *clip thinking* has two facets. On the negative side, it implies inability to focus on a task for a long time. On the other side, it is the inner feeling of the irrelevance of this effort-consuming concentration as we enjoy abundant chances to get any conceivable information whenever necessary, and this perception shapes the mind of the present-day younger generation.

1.2. Millennials in the educational perspectives

From a didactic point of view, the digital revolution means that modern students are less able to concentrate on lectures. The availability of the information through lectures, when they can immediately get the data they need online, however fragmentary it might be, works as a most powerful demotivator. The infinite information landscape with immediate access to any information resource in no time demotivates the modern learner in learning facts and figures which for centuries used to be considered as an indispensable part of any decent education.

These innovative trends and digital globalisation morph together to form a new reality which we have to learn to cope with if we plan to understand and fully realise the educational potential both of the students and the emerging digital monster.

It means that the evolutionary leap requires reconsidering new teaching/learning patterns, e.g. the *active learning* represented in few-shot learn-

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ing (Kimura et al., 2018; Suleimanova et al., 2018; Feng & Duarte, 2019; Xiao et al., 2020), or a new variety of traditional time-tested approaches to teaching (such as PBL learning) which, though sometimes unexpectedly, turn out to be quite effective. In other words, the teaching/learning patterns have to be adjusted to this new societal and educational reality.

Besides, it should be taken into account in education that it is the teachers' responsibility to prepare young people to cope with it – through using digital tools (DT) for academic and research purposes, research being one of the key education components.

Since in the global context of the digital revolution education is getting more and more practically oriented, educators have to be responding to the new demands society is putting forward. In the digital-age renaissance educators prepare learners with essential digital-age research skills, and integrate powerful digital tools into classes.

From a didactic perspective, there persists ever-growing awareness in academic circles that research should be the integral indispensable component of upscale education. In the ever-changing environment many approaches to education are 'stillborn' and rapidly grow outdated. Living in the digital age inhabited by centennials/millennials, also referred to as digital natives, calls for new approaches in education. It is time to rely on digital teaching practices and digital research practices that can be used in teaching (Suleimanova & Petrova, 2018; Diemer, 2012; Hamdani, 2018; Chernyavskaya, 2018, 2019).

We suggest consistently abiding by some principles and approaches to be practised in contemporary environments.

2. MATERIAL AND METHODS
2.1. Empirical data
Empirical data are arranged in two clusters: the data referring to teaching theoretical disciplines and those referring to students' research practices. We focused on teaching strategies which combine conventional, time-honoured approaches, on the one hand, and, on the other, digital innovations which can promote new skills the graduates are to foster so that they could be able to meet the requirements society is demanding.

The difficulty that many students today face in concentrating on one issue for a long time has imminently given rise to a change in the teaching practices. The concepts of project-based learning (PBL), active learning (AL) and few-shot learning are rapidly gaining ground. In spite of the fact that these practices are no news, they still need detailed elaboration in the new context with respect to teaching higher school students as education is inevitably getting more practically oriented, with the focus on involving students in mock events and then into the jobs which lead to existentially valid outcomes, such as scientific conferences, as active participants and partners. We shall share the experience and expertise in engaging students in such projects and other active learning devices.

The second empirical database refers to research in the academic environment, as the integral, indispensable component of top-quality education. It is an open secret that education is getting more and more practically oriented, yet the academic community persists in promoting research skills in students as it is the cutting-edge methodologies, research techniques and methods that shape a competitive specialist who can easily find viable solutions to the challenges the world offers today (Konstantinov, 2018). Scientists claim that, actually, research skills – in the broad sense – are the cornerstone of all kinds of human activity. The first researchers are newly born babies doing research all day long learning to survive in our world. The research competence is explicit in the operating EMT (European Master's in Translation) standard as the leading reference standard for translator training, in effect until the year 2024.

The EMT standard declares 35 competences to be mastered by prospective specialists, research-related ones among them. What follows is that a would-be interpreter and/or translator must be able to explain and justify the translation choice and to be on good terms with the linguistic and translation theories which is achieved through research experience.

As of today, in-depth research is impossible without big data resources which we suggest dividing into three types (see also Suleimanova & Vodyanitskaya, 2020): search platforms (engines), research platforms, and interactive platforms depending on the purpose of the research.

Digital engines (DEs) do facilitate and substantiate the results of the research, and in teaching millennials, as computer geeks, DEs make edutainment possible. DEs may be divided, first, into search engines vs research tools offering text analysis and linguistic experiment (Suleimanova & Vodyanitskaya, 2020, p. 95). Similar to Yandex, Google and other big data sources, text corpora are used as a source of linguistic data, being time- and resource-efficient data acquisition and preliminary processing tools. Through them functional style and discourse analysis can be put into effect. What remains seriously underestimated in teaching theory is their research potential. In this function texts can be analysed from a variety of perspectives. *SentiStrength* focuses on Sentiment Analysis/Opinion Mining. This engine searches for emotionally charged vocabulary in the text (the list is compiled on the basis of the dictionary data) and evaluates the negative vs positive perspective, or tone of the text. It is applicable in analysing social networks communication, ranging along the intensiveness scale. It can compare the original vs translated texts as regards their emotional and evaluation contents. Another tool – *VAAL-mini* – evaluates the subconscious emotional effect of the phonosemantic structure of the text on the addressee. It predicts the emotional response of the recipient and exploits it when generating texts with the desired effect. The system is applicable in advertising (naming, slogans), analysing individual speech characteristics and mass media texts.

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Tropes specialises in content-analysis and defines a text's stylistic register, its chronology, communicators, parts of speech (frequency, key episodes, logical steps, modality, etc.), and is applied in advertising, persuasive and academic discourse, mass media news and fiction.

These powerful DEs empower the researcher with the means of analysing 'ready' texts. What makes them even more promising is that they can be used for experimental purposes in psycholinguistics, sociolinguistics, and semantics. In this role they challenge traditional polling psycholinguistic practices: e.g. associative experiment, via *Mentimeter*, the system which processes poll returns online, representing the results in a variety of graphic formats (about 10). Its added value is that it is attractive with the younger generation as it is operated by the telephones.

Semantic hypotheses can be tested, registering the number of acceptable phrases (instead of polling native speakers). We may also use Google, Yandex and other search engines' research potential for cultural-linguistic research, for example, to analyse the word order in the attributive noun phrase (NP) to show that it reflects national cultural practices (see Suleimanova & Petrova, 2018). In this respect DEs do reshape research methodologies and are a challenge to the traditional polling linguistic practices. See Sheninger (2014, p. 205-208) for information on integrating various digital tools and content into educational practice.

We can add here the value of instilling in students one more relevant competence through digital tools, i.e. assessment as one of the key skills which implies the ability to find and retrieve necessary relevant information, comparing data from a variety of sources and critically assess them before putting them into practice (see section 5 below for the sample template).

2.2. Methods

The global digital net defines present-day educational paradigms to an extent never seen before. We tried to combine traditional (conventional) and innovative DT teaching practices and test how this combination works.

First, instead of the lectures in the *sage-on-stage* format, the concept of active learning in the form of the *few-shot learning* pattern was tested. The few-shot learning pattern implies that the students, after being offered 'quantum', or portion of information – it might be theoretical with the, however, practical (Suleimanova et al., 2020) relevance – are asked to build up on that information to further produce some 'marketable' product. Second, efficient teaching, as many educationalists claim (Herold & Fedor, 2008; Suleimanova et al., 2019), is getting team-personalised, which takes on the form of projects such as learning-by-doing, or PBL (project-based learning). It means distancing from abstract knowledge in favour of active learning, with the purpose of actively engaging students in problem solving activities which aim at working towards a practically relevant solution of a problem, while working in a team. The projects are delivered in the academic environment (e.g. at conferences); besides, the students are involved in conference arrangements at all the stages (see below for details).

The approach we promote here is that millennials/centennials, or generation Y learners (1) are more practice-oriented; (2) are the generation of participation (illustrated by the practical scientific conferences which involved students at each step); (3) can combine a wide variety of practical activities; and (4) are oriented on the result (or practical output, not mock teaching projects).

3. THEORETICAL BACKGROUND

To cope with the ever-changing world, the teaching profession has to deal today with a New Learner who emerged some 15 years ago – IGeneration, Millennials, or Generation Y. Prensky (2001) claims that our students have changed radically, referring to them as digital natives or digital immigrants. They are no longer the people the educational system was designed to cope with. What makes the issue most complicated is that the environment started changing and whirling as it never had before. Scientists claim that the traditional institutions are not as flexible as we meant them to be and the educational world is getting less and less recognisable. It flip flops our traditional perceptions of time, finance, gender and even space, which is getting, all of a sudden, unbearably and painfully global. We are facing a dynamic combination of changing mindsets, behaviours and skills (Sheninger, 2014; Konstantinov, 2018). How to cope with this? Greater access to the abundant information resources changes the learning trajectory focus from memorising and listening to arming the learner with the tools that help get oriented in the information oceans. Sheninger (2014, p. 14) writes: *'Students are engaged in their digital worlds, and they are learning without us'*. Maybe they no longer need us? Maybe we might reconsider our roles as sages-on-stage and learn to navigate and pilot them through this digital world as guides-on-site, and try to domesticate that digital monster? I believe, though, that it is still educators who can explain the fundamentals, introduce basic theoretical background and arm the students with the methods and methodology, teach them how to learn, how to retrieve information from and through search engines and pilot them towards the goal, relying on research engines on their way to the ultimate goal. My hunch is that we, educators, are not going to be extinct, at least for some 100 years if we learn to cope with the changes.

There are lots of strategies suggested for meeting the challenges of the changing world. To mention one of them, the general strategy on how not to lag behind the learners, or to get 'change

savvy' (Herold & Fedor, 2008) involves (a) careful entry into the new suggested setting; (b) listening to and learning from those (students included) who have been there or been at it longer; (c) being enthusiastic, genuine and sincere about the changing circumstances; (d) obtaining support for what needs to be fixed; and (e) developing a credible plan for making a fix or improvement.

We do not reproduce here the full list the authors suggested, though the idea is clear: the present-day educator must be open to and accepting of the changes. The point is that it refers to general principles but does not offer a tangible tool arming us, educators, with the practical guide to be used in class. For example, today delivering lectures in the traditional way as a sage on stage makes little or no sense at all.

Why?

Students are not motivated enough as they are only too well aware of the fact that they can refer (and actually must be sent by the teacher) to abundant information resources at their disposal. The teachers' responsibility here is to arm them with the routes, where to go and how to retrieve the data students need.

In the modern pragmatic world where we belong now, students are practically oriented; they demand practical skills and knowledge on which they expect to survive in their professional life. *Do not give me fish teach me how to fish*, as goes the old adage. One of the practical tools of change which we tested with our students is Project-Based Learning (PBL) (Suleimanova et al., 2018), directly relating to the discipline students are studying, instead of the end-of-the-term exams – it is the strongest motivator for a student, as well as for educators.

PBL adds to the teambuilding, students learn to exercise team spirit, they solve a practical problem, learn how to manage the research data. Besides, which is essential, they practise public speaking and fight the stage fright, not to mention achieving student satisfaction after an invariably successful presentation of the project. Pascal Finette (Finette, 2012) from Google says that we live in a culture of participation which combines technologies and networks that will in his opinion change the course of human history. It means that teambuilding nowadays is one of the priorities to be promoted in education.

Digital natives prefer to network simultaneously with others, process pictures, sounds, colours and video before texts; learn what is relevant, active, instantly useful and fun (Sheninger, 2014). Today's kids are digital-born into a media-rich, networked world of infinite possibilities. But their digital lifestyle is about more than just cool gadgets; it's about engagement, self-directed learning, creativity and empowerment (Sheninger, 2014). What is essential is that educators are also immersed in this world. Whether we like it or not, we live in the digital-age renaissance and have to be in tune with the real world and go digital. Educators are learning, in line with one more new popular concept of life-long learning, to be the catalysts for change and arm learners with much demanded digital-age research skills, and integrate powerful digital tools into classes.

Compare the concept of a digital learner with a traditional educator. Digital learners prefer:

– to access information quickly from multiple media sources (vs a slow release of information from limited sources);

– parallel processing and multitasking (vs linear processing, single tasks or limited multitasking);

– random access to hyper-linked multimedia information (vs linearly, logically and sequentially provided information);

– to learn 'just in time' (vs 'just in case');

– instant gratification and immediate rewards (vs deferred gratification and delayed rewards);

– to network simultaneously with others (vs working independently before networking and interacting with the team);

– processing pictures, sounds, colours and video before texts (vs processing texts before anything else);

– learning that is relevant, active, instantly useful and fun (vs traditional educators' approach where they feel compelled to teach memorisation of the content in the curriculum guide) (Sheninger, 2014).

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In other words, teamwork and being practical and fun are emphasised. We are expected to prepare students for success in a world that is becoming more dependent on technology, and the good side to it is that it transforms universities into vibrant learning communities.

4. STUDY AND RESULTS
4.1. Promoting active learning
Consider where and how the above advertised teaching/learning plans are implemented and to what effect in some sample templates.

Take one few-shot learning tool that changes teaching practices – it is analytical interpretation – e.g. in teaching Theory of Linguistics (which is not the most 'exciting' discipline for sophomores), we offer students a potential research object, relating it to the linguistic paradigm we mean to introduce to the students in lectures – e.g. a cluster of synonyms – and ask them to analyse the research route within the frame of different linguistic paradigms. It is actually a conventional *'what if'* exercise applied in a new perspective. Students 'toy' with a proposed research object in the cognitive/semantic, discourse or theory of speech acts or psycholinguistic or sociolinguistic perspective, then they have to elaborate appropriate research routes. As a result, they know how to handle research in a variety of linguistic schools and approaches and, if needed, they will be able to retrieve relevant data from different sources, to support their ideas. Besides, in this way they grow multidisciplinarily. I tried one more format and delegated delivering simple descriptive topics to students. They were asked to prepare team presentations, and in this way we could 'kill quite a few rabbits'. The students did search, arranged the information and delivered a presentation working as a team (instead of a boring professor drifting along the theme in his/her lecture). In this case I provoke some kind of competition between the teams, when students are listening to each other's performance with much greater interest than to a 'monotonous' teacher. In this way we delegate much work and creativity (which is quite a powerful motivator with modern students!) to the students, and try to cope with 'the wind of change'.

Another strategy we practise is engaging students in mock events (ME). Students majoring in translation studies are trained in the format of a mock event, e.g. mock conference on urgent issues, such as raising children in split families, or drug addiction, or exercising team spirit in the teamwork, etc. They get involved in the ME held for trainee interpreters in their practical courses on oral/written translation of English and Russian texts on economics. In (Fomina, 2018) we study ME's teaching effect and conclude that MEs help students develop relevant communication skills relying on social setting analysis and proceeding to practising the suggested communication patterns as well as promoting their interpreting skills. In addition to students' practising professionally relevant skills, such as translation/interpretation, and preparing conference materials (conference portfolio), MEs also facilitate active learning at the initial stages of preparatory work, providing a platform for synergy between different educational formats. Within the framework of this platform, the competences mastered while preparing the conference portfolio (abstract proposal, conference programme, etc.) offer added value for ME participants (Fomina, 2018).

The ME framework combines a wide variety of practical activities to produce a tangible output. At the beginning of the term, student teams of 4 to 6 are offered research issues (much debated and

pressing macroeconomic or related issues, such as privacy on the Internet, information security, consumer protection, digitalisation and technological change, etc.). Each team is asked to submit an abstract proposal including information on all panel/roundtable participants, i.e. the chair and discussants: name, assumed affiliation, paper title, and abstract.

An elected organising committee (2-3 students) 'publishes' the programme of the event (see Fomina, 2018) according to the standards recommended for such documents.

The organising committee chair opens the ME with a greeting and proceeds to the conference programme.

As a team under the assumed roles of economists, political scientists, lawyers, columnists, bloggers, etc., students swap their opinions about the phenomena in question (e.g. domestic violence, native advertising, renewable resources, restricted Internet access, sustainable development, etc.) and suggest a problem-solving stratagem.

Practising simultaneous English-to-Russian interpreting, real-time, is the key component. The conference venue is equipped with a booth for two interpreters, an individual audio conference system, a fixed projector and a large projection screen. The meeting table with an audio conference system (up to two languages) seats up to 20 participants (the room capacity is up to 50 people). Through the MC safe, low-risk experience students learn to work as a team, develop professionally relevant skills, and acquire hands-on experience both as conference participants and as organisers (Fomina, 2018).

A more advanced AL step is realised through involving students in a real conference, where they are engaged in all kinds of activities. For example, Moscow City University hosted the 54th International Linguistic Colloquium in 2019, with more than 80 participants from 35 European countries, South Korea and Japan, and English and German as working languages. Students were involved in a variety of activities at all stages: they communicate with the participants in writing, preparing abstracts and programme of the conference; they work as

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translators/interpreters (chouchoutage for members of the administration body with zero command of foreign languages, consecutive translation of presentations and city tours, escort translation in cultural events such as a visit to the Kremlin Ballet Theatre, and when attending to the practical needs of the guests, e.g. relating to catering, visa support, printing the necessary materials the participants asked for, etc.); they take part in the colloquium as presenters of research results in the poster session, when a student shows the poster on the screen accompanying it with a brief account of the research results. The posters, full-size, were on display on the conference site, so that the participants could later come up to the authors for detailed explanations. This format connects the topic to the author, thus making academic communication more focused. Besides, students organised and conducted panel interviews with educators from different countries, the interview agenda being suggested by the students.

The format used made students feel involved, motivated through understanding that they could take part in a long-term job with a tangible result, from the beginning to the successful end. When asked about the event afterwards, students reported that they enjoyed the activities and got invaluable practical experience they could rely on in their professional career. Besides improving translation and organisation skills, students raise their self-esteem as successful performance in a real important event promotes confidence. So, through

this process students proceed from mock conferences and activities towards engagement in real conferences.

The format of poster presentations we suggest is more likely to attract the attention of the audience, as the author first presents it (at the end of the plenary session) in front of the conference participants with a one-minute speech and poster on the screen. Then s/he stands by the poster in the poster area at the designated time and can explain in detail the contents and the results obtained to those who approach him/her for explanation.

4.2. Applying digital tools in students' research

As of today, cutting-edge digital technologies are an indispensable part of research in linguistics and other humanities. We cannot do without them as they offer infinite opportunities for research. We distinguish three types of digital engines (see 2.1. above and Suleimanova et al., 2020) applicable for research and search purposes. The algorithms are elaborated in many cases, though their full potential needs detailed analysis.

Still, since the digital world is in many respects *terra incognita* at the moment and every minutest detail related to its use needs attending to, any problem we hit upon must be solved. Let us focus on one such issue. When dealing with the numerous digital resources, which are increasing every day, the user is facing the problem of choice s/he has to make and hit upon the appropriate ones. The choice must be made after the assessment of the similar resources, which means that the student has to be competent enough to be able to critically analyse the resources, taking into account many-faceted criteria. Translation majors, for example, are expected to operate available translation programmes, both computer operated and via telephone. That is why they have to make a well-grounded choice.

To start with, the researcher studies the parameters specified in the description, i.e. the number of languages the resource employs, availability of free access, financial terms, etc. What is more relevant, however, is to test the system as regards its potential and the quality of translation. Doing this,

the students learn to critically analyse the platform and make well-grounded choices. We can exemplify such testing and assessment by a practically-oriented project (in the frame of the discipline, 1st year of the Masters' studies in Translation, Research Methodologies, 16 academic hours), which was meant to explore the potential of available digital services translation-wise, with the prospect of being used in a practical professional career.

Students were asked to look for available digital resources, test them on practical translations of the texts and compare the quality of the final translation product. To avoid experimental ambiguity the authors opted for the textbook on translation *Grammatical Aspects of Translation* (Suleimanova et al., 2011) where Russian-to-English translation problems were addressed. Accordingly, the authors generated a sample of 58 utterances where Russian utterances containing lexical and grammatical constructions which are potentially challenging, translation-wise, were passed through Google Translate, Yandex, and Prompt translation services. Among these are the following constructions:

– semantically void de-verbal nouns as part of a Russian noun phrase (NP), used in different functions; they are normally omitted in English (e.g. *проведение реформы привело к росту преступности – the reforms led to higher crime rates*);

– deverbal nouns in the NP denoting a dynamic change in the state of affairs (e.g. *рост продолжительности жизни позволил – higher life expectancy allowed*);

– deverbal nouns in the NP denoting a dynamic change in the state of affairs, accompanied by an adjective denoting speed/quality, etc. (e.g. *быстрый рост продолжительности жизни позволил – fast growth of life expectancy allowed*);

– deverbal nouns in the NP denoting a dynamic change in the state of affairs, accompanied by an NP specifying the quantitative parameters (e.g. *рост уровня жизни на 5% позволил – a 5% growth of the living standard allowed*);

– adverbial modifier of cause/reason, where the causative semantic component is reflected in the semantics of the predicate, while the adverbial

modifier is rendered as the subject of the English sentence (e.g. *из-за снижения уровня жизни – lower living standards resulted in*).

These constructions were rendered, structure-wise, quite satisfactorily.

The research revealed that in many cases the machine translation either offered a word-for-word variant or failed to reflect the structural specifics of the original, cf.: *Создание военных баз вокруг конфликтной территории может привести к – The creation of military bases around the conflict territory can lead to*, though in many cases the word *new* is a better choice *(New military bases around conflict zones can lead to)*; or in English-to-Russian phrase *in a flat matter-of-fact voice* translated as *плоским голосом / ровным сухим голосом / ровным будничным* while a better version is *сухо и деловито*, quite in line with the translation pattern *English attributes – Russian adverbs*. Cf. also *if untreated, the disease* translated as *при отсутствии лечения* in Prompt, against a better variant *если болезнь не лечить, она*.

The results with reference to the constructions we chose featuring in Google 26 out of 58 (44%), Prompt – 25 out of 58, Yandex – 24 out of 58. As a result, Google translate proved our platform of choice, at least what concerns translating syntactic constructions.

5. DISCUSSION

The emerging digital-learner personality as a 'product' of the digital era requires appropriate treatment from the learning/teaching perspective. Some of his/her specific features are already taken account of by educators in everyday practice, still some others remain untackled.

We do take advantage of the before-unimaginable opportunities the digital world offers.

Digital teaching is still an open research field and the researchers are expected to explore the exponentially growing learning/teaching and research potential of digital technologies. One of the tasks is to develop search and research skills in students and teach them to find, critically analyse and apply available tools for solving the problem they face. Each of these operations needs investi-

'So, the concept of active learning (AL) implies becoming wider and more practical. The activities must be practically relevant and produce some tangible results. As the teaching profession is tasked with preparing students for success in a world that is becoming more demanding, AL is a reliable tool to rely on. One more positive side to it is that it transforms universities into vibrant learning communities'

gation and elaboration. We have to explore the full potential and every seemingly simple algorithm must be made public and discussed so that as an academic community we move step by step from innocent users to well-armed professionals, together with our digital students.

We believe that combining conventional time-tested techniques and methods with new digital tools will result in a synergetic effect and will make teaching/learning more efficient and enjoyable.

So, the concept of active learning (AL) implies becoming wider and more practical. The activities must be practically relevant and produce some tangible results. As the teaching profession is tasked with preparing students for success in a world that is becoming more demanding, AL is a reliable tool to rely on. One more positive side to it is that it transforms universities into vibrant learning communities. We have to admit, however, that AL is often seriously underestimated and even neglected. It needs more attention and discussion. We must be working towards a healthy symbiosis of conventional teaching strategies, reconsider them and combine with digital engines both in teaching and research.

6. CONCLUSION

Modern pedagogy emphasises priorities, such as accepting this 'brave new world' of digital environment and being open to fast changes in the world. Living, or rather surviving, in the digital am-

bience, and enjoying it, an individual has no choice except mastering, fostering and befriending digital tools of all kinds. Digital engines reshape research methodologies, as well as teaching/learning practices in higher school.

The practical teaching experience will benefit from the combination of conventional teaching, e.g. project-based learning, or few-shot learning in teaching theoretical disciplines, analytical argumentation projects, adding considerations from a didactic perspective, such as mock events and real academic events. In addition, active involvement of digital platforms, such as search and research engines for solving research problems makes the educational process more effective, enjoyable and leads to brighter professional careers of the students, not to mention the professional upgrade of the second party to the process – the educators, who also benefit from the combination. A special skill students master is the ability to critically ana-

lyse and assess the available digital resources, which are rapidly growing in number, and to hit on the most appropriate one for the task is a challenge.

What needs to be tested is the potential of a variety of other devices that are available on the educational digital market, for instance, text correcting and editing, and some others, which could substantially facilitate acquiring professionally relevant skills and competences by the students and motivate them.

Acknowledgements

References

Chernyavskaya, V. E. (2018). Diskursivnyi analiz i korpusnye metody: Neobkhodimoe dokazatel'noe zveno? Ob'yasnitel'nye vozmozhnosti kachestvennogo i kolichestvennogo podkhodov [Discourse analysis and corpus methods: Necessary proving element? Explanatory potential of quantity and quality approaches]. *Voprosy Kognitivnoy Lingvistiki, 2,* 31-37.

Chernyavskaya, V. E. (2019). Korpusno-orientirovannyi diskursivnyi analiz identichnosti Rossiiskogo universiteta 3.0 [Corpus-assisted discourse analysis of Russian university 3.0 identity]. *Tomsk State University Journal of Philology, 58,* 97-114. Doi: 10.17223/19986645/58/7

Diemer, S. (2012, June 17-21). Corpus linguistics with Google? In *Proceedings of the International Society for the Linguistics of English* (pp. 1-14). Boston, MA: Boston University Press. Retrieved from https://www.bu.edu/isle/files/2012/01/Stefan-Diemer-Corpus-Linguistics-with-Google.pdf

Feng, S., & Duarte, M. F. (2019). Few-shot learning-based human activity recognition. *Expert Systems with Applications, 138,* art. 112782. Doi: 10.1016/j.eswa.2019.06.070

Finette, P. (2012, November 1). The participation culture: Pascal Finette at TEDxorangecoast. Retrieved from http://www.youtube.com/watch?v=yJMnVieDfD0

Fomina, M. (2018, November 12-14). The mock conference as a teaching tool to promote communication and interpreting skills. In *Proceedings of the 11th annual International Conference of Education, Research and Innovation ICERI2018* (pp. 4312-4318). Seville, Spain: IATED. Doi: 10.21125/iceri.2018.1959

Hamdani, M. R. (2018). Learning how to be a transformational leader through a skill-building, role-play exercise. *The International Journal of Management Education, 16*(1), 26-36. Doi: 10.1016/j.ijme.2017.11.003

Herold, D. M., & Fedor, D. B. (2008). *Change the way you lead change: Leadership strategies that really work.* Stanford, CA: Stanford University Press.

Kimura, A., Ghahramani, Z., Takeuchi, K., Iwata, T., & Ueda, N. (2018, September 3-6). Few-shot learning of neural networks from scratch by pseudo example optimization. In *Proceedings of the 29th British Machine Vision Conference BMVC2018*

(art. 105). Newcastle upon Tyne, UK: BMVA. Retrieved from http://bmvc2018.org/contents/papers/0366.pdf

Konstantinov, A. (2018). Tsifrorozhdennye: Aleksandr Kuleshov o primetakh budushchego, tsifrovom intellekte i pokolenii Z – lyudyakh, vospitannykh gadzhetami [Digitalborn: An interview with Aleksander Kuleshov on our future, digital intellect and Generation Z – people, who were brought up by Gadgets]. *Kot Shredingera, 1-2*(39-40). Retrieved from https://kot.sh/statya/3821/cifrorozhdyonnye

Prensky, M. (2001). Digital natives, digital immigrants: Part 1. *On the Horizon, 9*(5), 1-6. Doi: 10.1108/10748120110424816

Sheninger, E. (2014). *Digital leadership: Changing paradigms for changing times*. Thousand Oaks, CA: SAGE Publications.

Suleimanova, O., Beclemesheva, N., Kardanova, K., Lyagushkina, N., & Yaremenko, V. (2011). *Grammaticheskie aspekty perevoda* [Grammatical aspects of translation]. Moscow Russia: Academia.

Suleimanova, O., Fomina, M., Vodyanitskaya, A., & Yaremenko, V. (2020, March 2-4). Active learning in a wider perspective. In *Proceedings of the 14th International Technology, Education and Development Conference INTED2020* (pp. 908-913). Valencia, Spain: IATED. Doi: 10.21125/inted.2020.0325

Suleimanova, O., & Petrova, I. (2018). Ehksplanatornyi potentsial teorii klassov dlya lingvisticheskogo issledovaniya: Poryadok sledovaniya opredelenii [Explanatory potential of the theory of classes for linguistic research: Word order in the attributive group]. *Filologiya: Nauchnye Issledovaniya, 3,* 52-64. Doi: 10.7256/2454-0749.2018.3.26758

Suleimanova, O., & Vodyanitskaya, A. (2020). Setevye tekhnologii v sisteme obucheniya learning by doing [Digital engines in learning-by-doing education format]. *Society. Communication. Education, 11*(1), 90-99. Doi: 10.18721/JHSS.11107

Suleimanova, O., Yaremenko, V., Fomina, M., & Vodyanitskaya, A. (2019, March 11-13). Promoting communication strategies in the educational environment for professional purposes. In *Proceedings of the 13th International Technology, Education and Development Conference INTED2019* (pp. 1927-1931). Valencia, Spain: IATED.

Suleimanova, O., Yaremenko, V., & Vodyanitskaya, A. (2018, November 12-14). Combining project-based learning and role play in synergetic teaching. In *Proceedings of the 11th annual International Conference of Education, Research and Innovation ICERI2018* (pp. 10414-10419). Seville, Spain: IATED. Doi: 10.21125/iceri.2018.0964

Xiao, Y., Chang, Z., & Liu, B. (2020). An efficient active learning method for multi-task learning. *Knowledge-Based Systems, 190,* art. 105137.