THE IMPACT OF COMPUTER ASSISTED LANGUAGE LEARNING (CALL) ON FOREIGN LANGUAGE PROFICIENCY OF UNIVERSITY STUDENTS IN RUSSIA

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Abstract

The need for the study has been caused by the ever-increasing requirements set by the federal and regional educational authorities for the level of foreign language proficiency the university students need to demonstrate at the end of their studies. Various programs are growing in response to demand to develop longer sequences of foreign language training that will enable students to graduate from universities with an acceptable level of proficiency. Consistent with recognized current approaches to education, Russia views foreign language proficiency as comprising a broad set of competences, including: the ability to read and write, to speak and understand a foreign language and to function in a historically and culturally-appropriate and professionally-mediated way with the native speakers, etc.

Today universities cannot afford to look solely to conventional solutions to overcome the shortage of resources or qualified teachers to realize their goals. The foreign language professionals must look to technology as one possible avenue for meeting the requirements set forth in the educational standards. Computer assisted language learning (CALL) may not be the most appropriate response to every problem; however, it could be considered as an option.

The purpose of this paper is to analyze whether CALL may support different learning needs and styles of a new cohort of university students (known as Generation Z), enrich university curriculum with alternative CALL-based models for better learning outcomes, provide educational opportunities to everyone enrolled in academic programs, enable learners and teachers to create learning spaces to fulfil the claims and achieve the level of proficiency specified as compulsory for university graduates.

The methodological framework of the study rests on the comparative approach allowing accumulating best teaching strategies and practices of using CALL by top universities. A comprehensive analysis and synthesis of technical, pedagogical and managerial issues of CALL has also been provided. Based on the empirical approach, testing, evaluation and control of usability, accessibility, availability and safety of some CALL-based tools and resources have been performed. An experimental study has brought certain relevant data concerning attitudes and learning outcomes of students in a traditional versus CALL-based learning environment, advantages and disadvantages of CALL, etc.

The main result of the study is the design of a CALL-based model that enhances the quality of foreign language education and increases chances of achieving the desired level of language proficiency among the university students.

Keywords: computer assisted language learning (CALL), university, students, teaching, proficiency, foreign language, education.

1 INTRODUCTION

Today, more than ever, advancements in technology, including all newer digital technologies such as computers and the Internet, influence our jobs, scientific development, business relations and market cooperation, professional collaboration and political communication [1]. With time, the technology has come to play a central role in education too. According to the survey conducted by Pew Research Center, a nonpartisan American think tank based in Washington, D.C. (http://www.pewresearch.org/), 92% of teachers said that computers and the Internet has a “major impact” on their ability to access content, resources and materials, and many are finding that it helps their ability to interact with students [2]. Even more importantly, according to the study conducted by Cengage Learning, a leading provider of innovative teaching, learning, and research solutions for academic, professional, and library markets worldwide (https://www.cengage.co.uk/), 74% percent of teachers and instructors report that the move towards implementing digital technologies in the classroom has increased students’ academic performance, and 73% say it has improved students’ engagement with their courses. Less than 1% reported it has decreased performance or engagement significantly. College

and university students report similar educational benefits of using technology in the classroom: 80% say the move towards implementing digital technologies in the classroom has subsequently increased their academic performance, and 77% say it has improved their engagement with their courses [3].

The survey also reveals the degree to which the Internet and digital technologies may suffuse teaching activities. Laptops and desktops are still central, but mobile technology, particularly mobile phones use, has also become commonplace in the learning process. Teachers most often use digital tools to have students conduct research online. It is also common for these teachers to have students access (79%) and submit (76%) assignments online. More interactive online learning activities, such as developing wikis, engaging in online discussions, and editing work using collaborative platforms such as GoogleDocs, are also employed by some of the teachers. Students report the most effective uses of technology to be for their daily homework assignments (73%), online research (44%), and testing and examinations (37%). However, teachers' most used and reported digital content type as PowerPoint® (82%) was not estimated by students as an effective use of technology (68%) [3].

The impacts of the so-called digital era are obvious and often beneficial. We only have to admit that the information revolution that started in the last decades of the 20th century on a global scale has led to transition of human civilization from its industrial phase to the technologically enhanced stage of development [4]. Whatever we feel or think about what some have called the "digital revolution", we must accept that many, perhaps most, of the modern students are fully immersed in it [5]. According to the research provided by the generational experts from the Center for Generational Kinetics based in Austin (Texas, USA), most of the current students are members of the so-called iGen, Centennials or Gen Z community [6]. One key aspect of this generation is the widespread use of computers and the Internet from a very young age. Members of Generation Z (aka Gen Z, iGen or Centennials) are typically thought of as being comfortable with various digital tools and technologies. As a result, the digital or electronic method of obtaining educational information is a normal component of their life [6].

The new technologies are not only serving as powerful tools for educational change and reform, since they enable quick or exponential access to authentic and reliable information. More notably, technologies provide vast learning opportunities in a form of continuous lifetime knowledge and skills acquisition, thus, dramatically changing the existing learning and teaching modes, needs and styles. Besides, technologies are breaking down borders and barriers at a faster rate than is possible in physical terms. Sudden, unexpected encounters with other languages and cultures compel modern ICT-mediated societies and their digital citizens to face new choices, opportunities and challenges. It is not surprising then that there is much debate among the educators and researchers over the use of ICT in foreign language teaching and learning. Over the past few decades, various techniques, methods, activities and the degree of their application in the language training syllabus have undergone a number of serious expertise and changes alongside the evolution of technology itself [4].

The high standards set by the federal and regional educational authorities in Russia for the level of foreign language proficiency the university students need to demonstrate at the end of their studies, encourage many innovative teachers and instructors to review the existing learning and teaching patterns. Modern dynamic life makes its own ever higher demands on the teaching and learning outcomes of the prospective graduates, naming fluent and practical knowledge of at least one foreign language for everyday and professional communication among their priorities. As volumes of information grow, the routine ways of its transfer, storage and processing often prove to be ineffective. The use of information technology reveals the enormous capabilities of computer as a means of learning. And with the advent and development of the Internet, the possibilities of using computers in teaching and learning foreign languages have expanded enormously [7].

The analysis of the literature and personal experience as university teachers revealed that computers can serve a variety of roles in language teaching and learning. It can be a tutor for language drills or skill practice; a stimulus for discussion and interaction; or a tool for writing, research and even playing games. With the advent of the Internet, it can also serve as a medium of global communication and a source of limitless authentic materials [8]. As Nina Garrett pointed out in one of her articles, "the use of the computer does not constitute a method". Rather, it is a "medium in which a variety of methods, approaches, and pedagogical philosophies may be implemented" [9]. The effectiveness of computers in language learning and teaching can hardly reside only thanks to its medium or other related hi-tech features; conversely, only those who put computer technology in the service of good pedagogy will undoubtedly find ways to enrich their educational programs and enhance learning opportunities of their students. As with the audio language lab "revolution" of some 40 years ago, those who expect to get magnificent results simply from the purchase of expensive and elaborate systems will likely be disappointed. Today we witness an avalanche of emerging multiple digital tools, including computers,

tablets, iPads, smartphones, Smart Boards, digital cameras, etc. Teachers are learning how to teach with them, while students are using advanced technology to shape how they learn. By embracing and integrating technology in the classroom, we are setting our students up for a successful life outside of university. But "technology by itself will almost never change education" [10]. According to Dylan Arena, Ph.D., co-founder and chief learning scientist at Kidaptive (http://kidaptive.com/),"The only way to change educational practices is to change the beliefs and values of teachers, administrators, parents and other educational stakeholders – and that's a cultural issue, not a technological one ... It's about processes and people rather than bits and bytes" [10].

Computers and related electronic resources are no longer intended for the selected few since they exist in all forms of contemporary life, and. thus, affect educational institutions as well [5]. In this article we decided to analyze whether computer-assisted language learning (CALL) is still regarded as a relevant educational technology and may support different learning needs and styles of a new cohort of Generation Z students, enrich university curriculum with alternative CALL-based models for better learning outcomes, provide educational opportunities to everyone enrolled in academic programs, enable learners and teachers to create learning spaces to fulfil the emerging claims and achieve the level of language proficiency specified as compulsory for university graduates in Russia.

2 METHODOLOGY

The methodological framework of this research work rests on the comparative approach that allowed discovering and accumulating best practices and experiences of computer-assisted language learning (CALL) employment at the best colleges and universities for their further dissemination worldwide. A comprehensive analysis of the technical, pedagogical and managerial issues of CALL as an effective technology for foreign language teaching of university students has also been provided as an integral part of our research [5; 7; 8; 9; 11]. We examined the broad international experience concerning usability, accessibility, availability and safety of some CALL-based tools and resources inside and outside classrooms [1; 2; 4; 6; 11]. We examined and studied the broad international experience on CALL application as a source of innovation with the exact aim to improve the system of university education, and particularly foreign language training, in Russia. We also made an attempt to clarify the conceptual apparatus since there was an evident lack of a precise vocabulary in the domain of computer-assisted language education, which only limited the ability of researchers and practitioners within that field of knowledge to communicate clearly and succinctly with each other [23; 24; 25; 26].

Our experimental study has brought certain relevant data concerning attitudes and learning outcomes of students in a traditional versus CALL-based learning environment, and we tried to distinguish important advantages and disadvantages of CALL technology primarily for Russia. We also analyzed the meaning of "language proficiency" in terms of the recent trends in assessment of the ability of an individual to speak or perform in a foreign language. The provided study showed that there is little consistency as to how different educators and researchers in different parts of the world define and classify "language proficiency". The American Council on the Teaching of Foreign Languages (ACTFL), an American organization aiming to improve and expand the teaching and learning of all languages at all levels of instruction (https://www.actfl.org/), distinguishes between proficiency and performance, the latter being recognized though as the combined effect of the three modes of communication, namely: interpretive, interpersonal, and presentational [12]. The ACTFL's definition of proficiency has been derived from the numerous mandates issued by the U.S. government resulting in separation of concepts of fluency and language competence while considering individual "language proficiency" and setting preferences only for those seeking to live and learn oversees [12].

The European guidelines used to describe achievements of learners of foreign languages, known as the "Common European Framework of Reference for Languages: Learning, teaching, assessment" (CEFRL), seem to be more applicable and easier for educational institutions and employers in Russia to evaluate the language qualifications of university graduates for their further education or successful employment in this country [13]. First, the CEFRL supports the competence approach, which is widely hailed by most educators in Russia. Additionally, the CEFRL divides general competences in knowledge, skills, and existential competence with particular emphasis on communicative competences in linguistic, sociolinguistic, and pragmatic fields. Second, the CEFR allows three principal dimensions of language acquisition: language activities, domains in which the language activities occur, and competences acquired as a result. Third, the CEFRL admits that various language users may develop various degrees of competence in each of these domains and to help describe them the CEFR has provided a set of six Common Reference Levels (A1, A2, B1, B2, C1, and C2) [13]. Since Russia views foreign language proficiency as comprising a broad set of

competences, including: the ability to read and write, speak and understand a foreign language and function in a historically and culturally-appropriate and professionally-mediated way with the native speakers, the CEFR primarily deserves our attention as a valid instrument of proficiency assessment.

Proficiency in English is needed for prospective employees to advance in international companies and improve their technical knowledge and skills. It provides a foundation for what has been called "process skills" – those problem-solving, team working and critical thinking skills – that are needed to cope with the rapidly changing environment of the workplace; the area where English is playing an increasingly important role. Today's job market requires more than knowledge of another language. In the 21st century, a comprehensive essential skill set is needed for further education and employment. This includes competence in areas beyond languages such as numeracy, thinking skills, computer use, and the ability to work well with others [14]. Today's young people understand that "lifelong learning" is going to be the norm for them. The idea that learning of a second language is a ticket to a higher-level job or some international position is an outdated myth. Today knowledge of another language is one of a number of skills, which may help individuals acquire meaningful employment, or career advancement. In short, the focus in language education in the 21st century is no longer on grammar, memorization and learning from rote, but rather using language and cultural knowledge as a means to communicate and connect to others around the globe. Geographical and physical boundaries are being transcended by technology as students learn to reach out to the world around them, using their language and cultural skills to facilitate the connections they are eager to make [15].

3 RESULTS

Research and practice suggest that most of the common trends of the 21st century teaching and learning of foreign languages involve various computer and the Internet-based technologies, tools and methods. For example, these involves: e-Learning, web-based and mobile learning (m-Learning) and other forms of online education being considered by most educational institutions as a clue for continued educational success in a digital era [16]; employment of net-based real world applications, which allow students to apply theories to realty and see them in action [17]; gamification – with nearly half of the teachers admitting that they have at times incorporated online games into their classroom educational settings [18]; emerging use of open source textbooks, massive open online courses (MOOCs), crowdsourcing platforms based on networking, cooperation and collaboration [19]; blended learning – regarded as the foremost trend in language education [20], etc. No matter what kind or class of advanced technologies complement these trends, computers and the Internet are still central.

In fact, computer-assisted language learning (CALL) is not a new development in language teaching and learning. The use of computers in education of some developed countries started somewhere in the 60s of the past century. With the advent of convenient microcomputers in the 1970s, computer use has become widespread, for example in Britain and the United States, and ranged from primary school education to university level. Computers were basically used for limited instructional purposes though. The term CALI (computer-assisted language instruction) was quite popular then; it reflected the origin of computer-assisted instruction (CAI) and the purpose of using instructional computers in education in one of two ways: either to provide a straightforward presentation of data or fill a tutorial role in which the student was tested on comprehension [21]. The expression CALL (computer assisted language learning) began to replace CALI in the early 1980s [22]. Finally, at the 1983 TESOL (Teachers of English to Speakers of Other Languages) convention all the interested participants agreed upon a new term CALL aiming to embrace a wide range of emerging ICT-mediated applications and approaches to teaching and learning foreign languages under a single notion [21].

Since then, however, the term CALL (computer-assisted language learning) still lacks both precise definition and concise research methods despite the fact that revisions for the term are suggested regularly. Many scholars have made attempts to clarify the issue. As early as in 1997, Prof. Michael Levy gave a comprehensive overview of the relationship between the theory and application of computer-assisted language learning and described how the computer could be conceptualized as both tutor and tool. He also predicted the implications for upcoming computer programming and gave a succinct definition of the term CALL. According to M. Levy, computer-assisted language learning (CALL) may be defined as the search for and study of applications of the computer in language teaching and learning [23]. According to Prof. Carol A. Chapelle from Iowa State University, CALL – is a term widely used to refer to the area of technology and second language teaching and learning [24]. According to Ken Beatty, any definition of CALL should accommodate its changing nature and reflect the broad process of what may go on in a computer-assisted language learning environment, where a learner uses a computer and, as a result, improves his or her language skills. The author also thinks

that CALL has come to encompass issues of materials, design, technologies, pedagogical theories and modes of instruction, where materials for CALL can include those, which are purpose-made for language learning, and those, which adapt existing computer-based materials, video and other materials [25]. CALL may be defined in a variety of ways; its tools may range from the "traditional" drill-and-practice computer programs that characterized CALL in the 1960s and 1970s to more recent manifestations of CALL being used in a virtual learning environment and web-based distance learning. Its computer-assisted nature remains unchanged.

Based on the current philosophy of CALL, computer-assisted language learning – may be defined as an approach to language teaching and learning in which the computer is used as an aid to the presentation, reinforcement and assessment of materials to be learned, usually including two substantial elements, namely interactive learning and individualized learning. If interactive learning incorporates various digital media, including computing and social networking by students, into course design and delivery, then individualized learning puts a strong emphasis on student-centered materials that allow learners to work on their own [26]. The results of our study brought us to conclusion that this definition is in line with the view held by the majority of modern CALL practitioners.

The main result of the study is the design of the model of an efficient CALL-based student-centered learning environment, which will not at all serve as a substitute for traditional university premises with inspiring teachers and professors. The properly designed computer-assisted learning environment should make available, as the name implies, the use of electronic devices or computers to provide educational instruction and to learn. Quick access to the broadband Internet in a classroom is vital; it gives students the opportunity to expand beyond the boundaries of what they would find in a textbook. When technology is integrated into academic syllabus, students show higher motivation and interest in the subjects they study. Technology provides different opportunities to make learning more enjoyable and independent in terms of teaching same things in a new way. For instance, delivering teaching through gamification, taking students on virtual field trips and using other online learning resources could be a challenge. Additionally, technology can encourage a more active participation of students in the learning process, which can be difficult to achieve through a traditional lecture environment [27].

CALL is an essential tool that helps teachers to facilitate the language learning process. CALL can be used to reinforce what has already been learned in the classroom or as a remedial tool to help learners who require additional support. When classrooms and lecture rooms are equipped with all sorts of digital devices and multimedia equipment, adapted for work with both external and internal CALL-based and other free easily accessible digital educational resources, this only responds to the changing learning needs and styles of modern "digital" students, matches their preferences and meets their capabilities [28]. The well-organized CALL-based environment of university should also include the professionally structured university's website, easily attainable educational portal for electronic and distance learning offering inter alia access to massive open online courses (MOOCs), information-sharing crowdsourcing communities and virtual networking platforms, digital libraries, etc. [29].

CALL-based learning environment practically eliminates boundaries between teachers and students. The teacher’s role changes from keeper of knowledge to facilitator of learning. This opens new opportunities for educators to dramatically change the way their students learn. Increasingly, students and teachers rely on each other to access sources of knowledge and share information, expanding the general scope of educational process to include not just instruction, but the expansion of knowledge as well. In order to be effective, universities must see computers and associated technology as an essential part of their educational process [30]. For these purposes, the educational institutions while designing and using their learning spaces, curriculum and foreign language programs shall take into account some essential CALL principles and features, namely: (1) student or learner-centered approach (to promote learner autonomy and ensure better learning outcomes); (2) meaningful purpose (to motivate and foster educational process); (3) comprehensive and authentic input/ output (to duly instruct, teach and assess); (4) sufficient level of stimulation provided both cognitively and affectively (to meet various learning needs and expectations); (5) multiple modalities (to support various learning styles and strategies); (6) high level of interaction (to offer various modes of learning, e.g., human-machine or human-human); (7) broad variety of methods and techniques applicable (to enhance learning opportunities and increase level of language proficiency specified as compulsory) [21]. To be in tune, teachers shall also participate in some professional associations devoted to CALL.

4 DISCUSSIONS

Today many countries such as Korea, Japan and China frame their educational policies to teach at

least one foreign language at the primary and secondary school levels. According to the U.S. Government Accountability Office (GAO) (https://www.gao.gov/), China has recently been putting enormous importance on the English language learning and teaching at university level as well. Moreover, some countries such as India, Singapore, Malaysia, Pakistan, and the Philippines use English as a second official language in their governments. Many analysts explain this phenomenon by the fact that we live in the era of globalization where English language acts as the major medium of integration and communication. Educational authorities in Russia also impose high demands on the level of English language proficiency the university students need to demonstrate at the end of their studies. The modern concept of higher education development in Russia aims to resolve a number of urgent problems, the major issues of concern still focusing on institutional organization, infrastructure, personnel policy, content standards, innovative educational technologies, and quality assessment [31].

Today universities cannot afford to look solely to conventional solutions to overcome the shortage of resources or qualified teachers to realize their educational demands and goals. The foreign language professionals must look to technology as one possible avenue for meeting the requirements set forth in the federal and regional educational standards for language proficiency of the university students. Computer-assisted language learning (CALL) may not be regarded as the only clue to all problems in the area of foreign language education; however, it could be considered as a good option since its broad potential of tools and methods is not limited to computers and relevant software programs [22]. The history of CALL suggests that at different phases of its development this educational technology served a variety of purposes and uses, played multiple roles and employed dozens of tools [1; 20; 21].

In 1996 Prof. Mark Warschauer from the University of California, Irvine, USA conducted a profound research in the sphere of CALL from the pedagogical perspective [32], and came to conclusion, that the development of CALL technology can be divided into three distinct historical phases, namely: Behaviorist (later called Structural), Communicative (or Cognitive) and Integrative (or Sociocognitive or Socioconstructive) CALL. Importantly, these three stages have not occurred in a rigid sequence; as each new stage has emerged, the previous stages continue to exist and operate. According to M. Warschauer, each stage was marked by peculiar view of language in terms of the relevant foreign language approach, the leading English teaching paradigm, particular use and role of computers, principal objective, and specific typological characteristics or features [8; 11; 21; 22; 32].

Thus, Behaviorist or Structural phase (first implemented in the 1960's and 70's) was marked by the following: (1) View of language: structural approach (a formal structural system of language); (2) English teaching paradigm: grammar-translation and audio-lingual methods; (3) Principal use and role of computer: a tutor, serving mainly as a vehicle for delivering instructional materials for drill and practice to the learner; (4) Principal objective: accuracy; (5) Typological characteristics or features: repeated exposure to the same material was believed to be beneficial or even essential to learning. A computer is ideal for carrying out repeated drills, since the machine (a) does not get bored with presenting the same material and (b) it can provide immediate non-judgmental feedback [21; 22; 32].

Communicative or Cognitive CALL (became prominent in the 1970s and 90s) is characterized by the following: (1) View of language: communicative and cognitive approaches (a mentally constructed system exercised through interaction); (2) English teaching paradigm: communicative language teaching methods; (3) Principal use and roles of computer: (a) a tutor (to make communicative exercises and practice language use but in a non-drill format, by giving students choices, control and interaction; (b) a stimulus (to stimulate writing or discussions via computer programs); (c) a tool (that do not provide language material via computer programs, but enable learners to understand and use the language, as with word processors, desk–top publishing, spelling and grammar checks programs, etc.); (4) Principal objective: fluency and skills; (5) Typological characteristics or features: focuses more on using forms rather than on the forms themselves, the target language being used exclusively. Grammar is taught implicitly rather than explicitly; computers are used to stimulate discussion, writing or critical thinking; students are encouraged to generate original utterances rather than just manipulate prefabricated language; the communicative CALL programs provide skill practice in a non-drill format, through language games, reading and text reconstruction; the computer programs avoid telling students that they are wrong and remain flexible to a variety of student responses [8; 11; 21; 22; 32].

Integrative (Sociocognitive or Socioconstructive) CALL (1990s – to present time) is regarded by M. Warschauer as the current approach based on two important technological developments of the last decade: multimedia computers and the Internet. Integrative (Sociocognitive or Socioconstructive) CALL is characterized by the following: (1) View of language: sociocognitive or socioconstructive approach developed in social interaction through discourse communities; (2) English teaching paradigm: content-based, ESP (English for Specific Purposes) and EAP (English for Academic

Purposes) focused language teaching methods; (3) Principal use and roles of computer: a tutor, a stimulus and a tool to perform real-life tasks based on authentic discourse; (4) Principal objective: agency – as the satisfying power to take meaningful action and see the results of the decisions and choices; (5) Typological characteristics or features: based on such technological developments as multimedia computers and the Internet, which have brought text, graphics, sound, animation and video to be accessed on a single reasonably cheap computer. The resources are all linked and called "hypermedia", enabling learners to navigate through CD-ROMS and the Internet at their own pace and path, using a variety of media. This type of CALL, consequently, includes two subtypes: Multimedia CALL (supported by CD-ROMs); and Web-based CALL (enhanced by the development of the Internet and the relevant web-based tools and resources) [1; 4; 8; 11; 21; 22; 28; 29; 32].

Multimedia CALL is characterized by possibility to create a more authentic learning environment using different media. Language skills here are easily integrated through multimedia; students have a high degree of control over their learning through hypermedia; it facilitates a principle focus on the content without sacrificing a secondary focus on language form. Web-based CALL is characterized by: (a) CMC (Computer-mediated communication), which provides authentic synchronous and asynchronous communication channels; language learners can, thus, communicate directly, inexpensively, and conveniently with other learners or native speakers of the target language at any time and in any place. CMC can be carried out in several forms: it can be one-to-one, one-to-many, or many-to-one. (b) The Web (short for World Wide Web or the Internet), where students can search through millions of files around the world within minutes to locate and access authentic materials exactly tailored to their own personal interests; students can use the Web to publish their texts or multimedia materials to share with partner classes or with the general public. [1; 4; 8; 11; 21; 22; 28; 29; 32].

In 2003, the British scholar Stephen Bax from the Canterbury Christ Church University College, UK offered a critical examination and reassessment of the history of CALL presented earlier by M. Warschauer, and argued for three new categories. S. Bax offered their definitions and descriptions but preferred to talk about approaches rather than phases [33]. In his view, these new three approaches allow a more detailed analysis of CALL-based institutions and classrooms rather than with the earlier analyses [33]. According to Bax, the new categories comprise Restricted, Open, and Integrated CALL. Bax suggested that we are currently using Open CALL approach, but should aim to attain to a state of "normalization" in which the technology is invisible and truly integrated. In his study Bax also proposes some ways by which this "normalization" can be achieved thus setting an agenda for CALL practice in future (e.g., by using ethnographic assessments and action research) [21]. As Bax states, "Restricted CALL" approach differs little from Warschauer and Healey's "Behaviourist CALL" [34] in terms of its historical period and its main features, but in his view, the term "Restricted" is more satisfactory [33].

The term "Restricted" allows to refer not only to a supposed underlying theory of learning but also to the actual software and activity types in use at the time, to the teachers' role, to the feedback offered to students and other dimensions – all were relatively "restricted", but not all were "behaviourist". The term is more comprehensive, more flexible and therefore more satisfactory as a descriptor [21; 33]. Also, according to Bax, "Open CALL" approach is more open in terms of feedback given to students, software types and the role of the teacher. It includes simulations and games [21; 33]. And finally, Bax, in contrast to Warschauer and Healey [21; 32; 34], prefers the term "Integrated" rather than "Integrative". The key point about Integrated CALL – which sharply distinguishes it from Warschauer and Healey's formulation [32; 33; 34] – is that it does not yet exist to any significant degree, but represents instead an aim towards which we should be working [21; 33]. Bax points out, that there is still an element of fear and exaggerated expectations surrounding ICT, and this has to be overcome in order to achieve a state of "normalization" being the central part of Integrated CALL approach [33].

The typology of CALL history and typology of CALL programs and applications are interrelated. Their preference depends at most on principal objectives put before teachers and learners while using computers. In other words, the principal roles of computers in computer-assisted language learning are quite essential. Normally, computer may be used as a tutor, a stimulus and a tool [8]. If computer is used as a Tutor, the programs and applications here may be used for separate aspects of language teaching and learning. CALL programs designed for teaching grammar include: drill and practice on a single topic (e.g., Irregular Verbs); drills on a variety of topics (e.g., Advanced Grammar Video Series); games (Brain Games: Code Breaking), programs for test preparation (TOEFL Test Grammar Examples and Practice Tests), grammar units are also included in a number of comprehensive multimedia packages (New Dynamic English, Learn to Speak English Here and Now). CALL programs designed for listening include those specifically designed to promote second-language listening (Listen!), multi-skill drill and practice programs (TOEFL Mastery), multimedia programs for second

language learners (Accelerated Learning), multimedia programs for children or the general public (Aesop's Fables), etc. CALL programs designed for pronunciation include programs generally allowing students to record and playback their own voice and compare it to the model or such programs may include similar features (Sounds American, Conversations). CALL programs designed for reading include reading programs for ESL learners (Reading Adventures), tutorials for children or general public (Reading Critically), games (HangWord), more general educational programs which can assist reading (`Twas the Night Before Christmas) and text reconstruction programs, which allow students to manipulate letters, words, sentences, or paragraphs in order to put texts together. Text reconstruction programs can be used to support reading, writing, or discussion activities (Hyperbole, Super Cloze). CALL programs designed for vocabulary include drill and practice programs (Synonyms), multimedia tutorials (English Vocabulary), flashcards and games (Hangman, Scrabble). Programs designed for writing include such tutorials as Sentence combining, Sentence maker, Typing tutor. There are certain comprehensive multimedia programs designed to teach ESL students a variety of skills. Among the better known are: New Dynamic English, My English eLearning Portal, English Discoveries, etc. [7].

If computer is used as a Stimulus, CALL programs and applications shall aim to generate analysis, critical thinking, discussion, or writing rather than serve as a tutorial in itself. Especially effective in this respect is such software that includes simulations or serious games (Oregon Trail, SimCity, Sleuth). When computer is used as a Tool, the programs and applications here may be used for separate purposes of language teaching and learning. Word processing – is the most common use of computer as a tool, and probably most common among the overall uses of computer for language learning (Microsoft Word, Microsoft Works). Grammar checkers, Spellcheckers, and Style checkers are designed for native speakers and may be confusing to foreigners; thus, they are not recommended for ESL or EFL learners. Concordancers or concordance software searches through huge files of texts in order to find all the uses of a particular word or collocation; this software can be of help for computer-assisted translation (AntConc, AdTAT, Oxford MicroConcord). A number of tools exist to help students work on their writing collaboratively on computers linked in a local area network in a real-time mode (Daedalus Integrated Writing Environment). Dictionaries and encyclopedias could be both on CDs and on the net providing opportunities for proper citing and referencing (Longman Dictionary Online) [1].

The three most popular uses of the Internet for language teaching are: electronic mail (e-mail), the World Wide Web, and MOOs (a "Multiple-user-domains Object Oriented" text-based virtual reality system to which multiple users or players are connected simultaneously). MOOs allow for real time communication, simulation, and role playing among participants inside and outside the class settings. Authoring programs allow teachers to legally tailor software programs either by inserting new texts or by modifying the activities. Many of the programs listed earlier allow teachers to make the content more relevant to their own teaching needs and greatly extend the application of this software too. By allowing students, to develop their own texts, these programs become even more communicative and interactive. On the other hand, authoring programs allow teachers – true enthusiasts to design their own multimedia programs, courseware and electronic resources (CALIS, DASHER, Wixie Online) [7].

5 CONCLUSION AND RECOMMENDATIONS

As we see, computers can have a variety of uses in language teaching and learning today. The properly organized CALL-based learning environment can be highly beneficial for both teachers and students. CALL inherently supports learner autonomy and fosters student's motivation; it provides multiple learning modes and meets student's needs; it offers numerous computer-mediated activities, tools and resources and enhances learning opportunities. Integration of the Internet and Web 2.0 tools and activities into the CALL-based course curriculum blurs the boundaries between different tech-based methods and technologies. There is a threat that CALL may be simply dissolved in the abyss of such innovations as discussion lists, blogs, wikis, podcasts, social networking; computer mediated communication (CMC), mobile-assisted language learning (MALL), Virtual worlds, Second Life, etc. The other problem concerning CALL is directly related to institutional and human factors, which jointly create barriers hampering the practice of effective CALL employment at some universities in Russia. The common problems may be grouped into the following clusters: (1) the financial barriers caused by the government and institutions; (2) the need and availability of reliable computer hardware and software; (3) the low level of theoretical and technical ICT literacy of both students and teachers; and (4) the common and positive acceptance of the CALL technology by all the interested participants [35].

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