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CURRENT RESEARCH VIEWS ON PITFALLS AND POTENTIALS
OF THE USE OF TECHNOLOGIES IN CALL

Abstract. The present study analyses the potentials and pitfalls of the use of the technologies within current research studies on CALL (Computer Assisted Language Learning). The main outcome of the analysis is the fact that many of the researchers and scholars discussing various CALL-connected problems often point to general pitfalls and potentials of the use of technologies in education. It means that not many of the pitfalls and/or the potentials are aimed at foreign language education, but refer to various CAL (Computer Assisted Learning) problems in general.

Keywords: CALL (Computer Assisted Language Learning), CAL (Computer Assisted Learning), FLE (Foreign Language Education), technology.

ПУЩЕНРЕЙТЕРОВА Я.
КОМПЬЮТЕРНОЕ ОБУЧЕНИЕ ЯЗЫКУ:
ПОДВОДНЫЕ КАМНИ И ПОТЕНЦИАЛЬНЫЕ ВОЗМОЖНОСТИ

Аннотация. Представлен обзор современных исследований по изучению преимуществ и недостатков применения компьютерного обучения языку (CALL). Автор приходит к выводу о том, что ученые, обсуждая различные проблемы, связанные с CALL, часто указывают лишь на общие недостатки и преимущества использования компьютерных технологий в образовании. Это значит, что в фокусе исследовательского внимания находятся различные проблемы компьютерного обучения в целом и практически не исследуются преимущества и недостатки данного подхода в применении к обучению иностранным языкам.

Ключевые слова: CALL (компьютерное обучение языку), CAL (компьютерное обучение), FLE (обучение иностранному языку), технология.

Introduction

New inventions and technologies were (and still are) usually quickly implemented into the educational world. As foreign language education is one segment of the educational world, it can therefore be claimed that new technologies could be also implemented into this field. As for the computers, they were introduced in the field during World War II; they mostly were large, mainframe computers used for mechanical translations and cryptography. By the 1960's, linguists started to use computers to create concordances for text analysis [3].

CALL has more than 50 years of tradition. Many authors write about the history, presence and even future of CALL in their works. M. Warschauer divides the history of CALL into three main stages or phases: Behaviouristic (Structural) CALL; Communicative CALL and Integrative CALL [10; 11].

K. Veselá also deals with the future of CALL and adds the fourth stage – Ubiquitous CALL, which can be characterized by omnipresent technology and pervasive presence of foreign languages [9]. She cites Wheeler (2009) who developed the idea about ubiquitous computing in a learning context and claims that if the following definition is applied to CALL, the term “Ubiquitous CALL” is approvable: “U-learning will rely heavily on access to devices and tools that enable and support learning in any context, whether mobile or static, anywhere 24/7, and in a manner that is seamless and unobtrusive. It will also need to be ‘intelligent’ according to the strictest interpretation of the ubiquitous model, so that it can predict changing contexts and user needs as they occur. The key tools of U-learning will be mobile phones, laptops and other wireless devices” [9, p. 40].

M. Warschauer stresses the fact that “(...) stages have not occurred in a rigid sequence, with one following other, from ‘bad CALL’ to ‘good CALL’, since any of these may be combined for different purposes [12, p. 10]. However, there has been a general transformation in CALL over the years with new ideas and uses of computers being introduced.

Analysis of the current studies concerning CALL

Due to the fact that CALL is becoming more and more popular in current language learning and teaching, many of the scholars are concerned with its potentials and drawbacks. One of the older analysis of potentials of CALL is provided by M. Warschauer and D. Healey (1998). The authors write about beneficial aspects of CALL which, in the opinion of the scholars, are the following: “(...) 1) multimodal practice with feedback; 2) individualisation in a large class; 3) pair or small group work on projects; 4) the fun factor; 5) variety in the resources available and learning styles used; 6) exploratory learning with large amounts of language data; and 7) real-life skill building on computer use” [11, p. 59]. The authors do not provide any pitfalls of CALL.

S. Cabrini (2007) views the advantages, or rather benefits of using new technologies in English teaching/learning as follows:

1) Teachers have the opportunity to call students’ attention by using sounds, different types of letters, images, etc., which is more effective since it helps the learners of a language to visualize the contents;

2) The Internet with its tools and applications helps to study a language in a cultural context, which is a must in terms of language pedagogy;

3) Technologies, especially the Internet can be used for publishing many of the works of learners (poems, stories, essays, etc.). This is a benefit because learners have access to other learners' works and feel more responsible when working on some piece of writing since the teacher will not be the only one who can read the final work;

4) Development of thinking skills is another positive feature as: "(...) once information has been obtained, the results must be reviewed which requires scanning, discarding, and evaluative judgement on the part of the learner. The information must be put together to make a complete and coherent whole which entails the synthesis process. Such an endeavour permits students to practise reading skills and strategies";

5) Increasing learners' motivation is the next benefit; furthermore, while learners are motivated, at the same time the wide range of activities makes them feel more independent;

6) The Internet provides greater interaction;

7) The Internet also fosters global understanding, which has implications for both teachers and students of a foreign language.

S. Cabrini also comments on the disadvantages, or rather obstacles of the use of new technologies in the language classroom, presenting the following opinions: 1) the nature of the Internet as a form of new technology is an obstacle itself. This is connected with technical problems, such as connectivity or limited access, etc. 2) lack of training; 3) availability of resources [4].

Han (2008) claims that: 1) CALL programs offer language learners more independence from classrooms; 2) language learners can study anytime and anywhere; 3) CALL programs are great stimuli for language learning; 4) computer can serve as a source of interaction for teachers and learners; and 5) variety of materials and approaches provided by a computer can help classroom teaching. The mentioned author also writes about possible barriers: 1) financial; 2) technological, being mostly connected with the computer and the learners' incapability to handle some unexpected problems; 3) the need of training on both sides, i.e. the teachers' and the learners' [8].

Shyamlee and Phil (2012) claim that language teachers should use the technology to 1) develop learners' interest in study; 2) promote learners' communication capacity; 3) widen learners' knowledge to gain an insightful understanding of the culture of the target country; 4) improve effect of teaching; 5) improve the interaction between a learner and a teacher; and 7) provide flexibility to course content. On the other hand, according to the mentioned authors, technology should not be used as "(...) 1) a major means replaced by the assistive one; 2) loss of speaking communication; 3) restriction of students' thinking potential; and finally 4) abstract thinking replaced by imaginative thinking." [8, p. 35].

In their study entitled "Technology in Language Education: Benefits and Barriers", M. J. Riasati, N. Allahyar and K-E. Tan (2012) analysed a number of studies concerned with the issue

of technology in language education. The outcomes of the analysis have been presented as a set of the advantages and disadvantages. The first of them were found to be:

1) *Engagement* – this advantage involves increasing and enhancing learners’ motivation altogether with the fun factor (also mentioned by M. Warschauer and D. Healey in 1998);

2) *Improvement in academic ability* – which is achieved by changing learners’ attitude and boosting their self-confidence. Furthermore, technology enhances language proficiency of learners and their overall academic skills;

3) *Paradigm shift in teaching and learning* – as already stated in the analysis of Ubiquitous CALL, learner-centred approach is nowadays taken for granted. In order to meet the needs of ‘digital natives’, teachers have to take new roles –facilitators, navigators and guides. The overall shift from teacher-centred approaches to learner-centred approaches altogether with the already mentioned teachers’ roles is very beneficial for the learner;

4) *An assessment shift* – the 21st century learning stresses the development of learners’ autonomy. Such development is to be achieved also by the overall assessment shift from teacher to self and peer evaluation;

5) *Collaborative learning enhancement* – the use of technology encourages collaboration and communication in learning activities;

6) *Lowering learning anxiety level* – according to the analysis of several studies, the authors conclude that technology lowers learners’ language learning anxiety whilst giving them more opportunity to communicate.

Besides the advantages specified above, the authors of the presented study are of the opinion that the use of technology in language education also encounters several barriers which are:.

1) *Lack of access*;

2) *Lack of effective training* – the authors claim that teachers must increase their computer competency in order to use the technology in the classroom effectively. Despite that fact, “(...) many researchers believe that lack of teacher training, lack of knowledge and practice are tools that prevent successful use of the Internet as learning tool”;

3) *Teachers’ attitude* – clearly, teachers’ (negative) attitude to the use of the technology in the classroom is one of the barriers. Some teachers feel frightened to use technology in the classroom, some view technology as a disruptive tool and many traditionally-minded teachers can be afraid of authority loss;

4) *Students’ attitude* – despite the general claim that learners are being reported as keen users of technology (educational technology included), in case a shift from the traditional teaching and

learning approach to the technology-enhanced approach is sudden and drastic, learners can react negatively and resist such changes; consequently, such a reaction may result in poor academic performance;

5) *Lack of time and technical support* has been specified as the last barrier in adoption of new technologies in language learning/teaching process [7, p. 27].

A. AbuSeileek and A. Abu Sa'aleek (2012) stress the merits of CALL as follows: 1) technologies can facilitate a variety of learning tasks; 2) motivation factor is strong; 3) CALL-connected teaching enhances the development of learners' motivation; 4) learners become more autonomous; 5) computers can serve as a platform for communication between learners and teachers; 6) teaching and learning resources can be stored and shared anytime and anywhere by teachers as well as learners; 7) CALL programs have the potential to be recognized as a set of stimuli for language learners; 8) while using a computer there occurs a form of the learner-teacher interaction; and 9) there can be observed the development of computer literacy. At the same time, 1) computers and other equipment needed in CALL is expensive; 2) computers can do only what they are programmed to do; 3) students and teachers need training; 4) some learners can never really become accustomed to working with computers; and 5) due to technological barriers, computers cannot handle unexpected situations [1].

A-T. Dina and S-I. Ciornei (2013) provide a list of benefits of integrating new technologies into language teaching and learning: 1) computers can promote language interaction between learners and teachers; 2) they can stimulate some processes and phenomena in motion through the animation; 3) it provides methods and manners of organizing efficient and modern forms of the educational process; 4) it supports intellectual development of the learners by helping them getting used to the technology from an early age; 5) it offers a possibility of realising a string of didactic operations which are very important for the development of learners' creativity (and also for the evaluation of their work) [5].

The same authors also highlight that there is also a number of disadvantages that may alter the language learning process. Some of them are: 1) weakening of the role of the teacher in the learning process; 2) division in small sections as well as delimitation of content leads to the shortening of the subject matter, at the same time favouring the students who possess analytic thinking, but not those with synthetic thinking; 3) the process of excessive control of the learners' mental activity by teachers stops the learners from developing creative abilities; 4) excessive individualisation of learning can lead to the denial of the learner – teacher dialogue and leads to the isolation of the learning process from its psycho-social context [ibid.].

Finally, in the most recent study, N. Bani Hani (2014) provides the following sum-up of the advantages of CALL from a number of studies: 1) computer may serve as a suitable tool for provoking effective classroom activities that help with the language acquisition; 2) learners can use CALL contents inside as well as outside the classroom; 3) CALL offers individualised, continuous and authentic teaching activities; 4) it can reduce students' apathy and helps them be involved in the learning process more effectively (i.e. it supports learner-centred approaches to learning); 5) it serves as a tool for the integration of four skills; and 6) learners are provided with immediate feedback.

Nevertheless, the author stresses the fact that seems to be one of high importance to us: "(...) none of the above should blind methodologists to the fact that teachers should not be neglected or replaced by the computer. On the contrary, CALL is calling for the establishment of rapport between the teacher and the computer. Therefore, it is downright risky to claim that the computer will delimit the role of the teacher in language classroom but it will definitely change it" [2, p. 1611].

As for the disadvantages, on the base of the analysis of several studies, the author classifies several common categories of CALL barriers: "(...) 1) financial barriers; 2) availability of computer hardware and software; 3) technical and theoretical knowledge; and 4) acceptance of technology" [ibid.].

The analysis of pitfalls and potentials described above was encapsulated in Tab. 1, which summarises the most common and the most important potentials and pitfalls of the use of new technologies in current foreign language learning/teaching. The categories – overall use, planning and organisation, flexibility, communication and students' learning – are taken from the large-scale study on blended learning conducted by Linsey et al. (2005), which is aimed at the issues concerned with the use of Virtual Learning Environment (VLE) system. In fact, the issues are the categories listed above. Since such a VLE system is based on the use of the technologies and CALL in general, we have decided to use the mentioned categories for the construction of Tab. 1.

The category *overall use* needs no explanation. *Planning and organisation* is connected with the learners' ability to effectively manage their study activities in terms of planning and organisation. *Flexibility* is a key issue associated with planning and organisation; it relates to one's ability to work with the learning content at a time and place suitable for a learner or teacher. The category *communication* refers to communication-based activities and within the category *student learning* of particular interest is the indication that a student's approach to learning is not fixed but can be seen as subject to change as a result of the learning contexts [6].

Table 1.

Potentials and pitfalls of technologies in current foreign language education

Category	POTENTIALS	PITFALLS
1. OVERALL USE	<ul style="list-style-type: none"> • engagement (motivation, the fun factor) • visual content • variety of resources • development of computer literacy • development of creativity of teachers and learners • source of authentic materials 	<ul style="list-style-type: none"> • financial barriers • lack of training of learners as well as teachers
2. PLANNING & ORGANISATION	<ul style="list-style-type: none"> • paradigm shift from teacher-centred to learner-centred approach • development of learner's independence and autonomy • development of learners' responsibility for their learning 	<ul style="list-style-type: none"> • time consuming preparation for teachers
3. FLEXIBILITY	<ul style="list-style-type: none"> • learning without time and place restrictions (so called 24/7 learning) • limitless actualisation of course content • limitless sharing of the content among learners and teachers 	<ul style="list-style-type: none"> • problems with availability of computer hardware and software • computer cannot handle unexpected situations
4. COMMUNICATION	<ul style="list-style-type: none"> • collaborative learning enhancement • lowering learning anxiety level • tool for interaction between teachers and learners • platform for communication in the target language between learners and teachers 	<ul style="list-style-type: none"> • insufficient teacher-learner interaction • lack of speaking activities
5. STUDENT LEARNING	<ul style="list-style-type: none"> • improvement of academic ability • intellectual development • development of self-assessment of learners • development of creativity • development of global understanding • study in cultural context • integration of the four language skills (reading, listening, writing, speaking) • development of four language skills (reading, listening, writing, speaking) 	

Conclusion

Despite the fact the data in Tab. 1 were taken from the studies explicitly concentrated on CALL, the pitfalls and potentials stated above are insufficient in terms of FLE. On the basis of the literature review, we can claim that many of the researchers and scholars discussing various CALL-connected problems often point to general pitfalls and potentials of the use of technologies in

education. It means that not many of the pitfalls and/or the potentials mentioned above are specifically aimed at FLE, but refer to various CAL (Computer Assisted Learning) problems in general (which are of course present in FLE, as CALL is a subfield of CAL). Last, but not least, we propose Tab.2 (in which items on the white background refer to general CAL pitfalls and potentials; items on the grey background refer to FLE pitfalls and potentials), which provides a more synthetic insight into CALL pitfalls and potentials. It refers to the pitfalls and the potentials from the point of view of a learner, a teacher and a computer (as the most important means of modern educational technologies).

Table 2.

Potentials and pitfalls of CALL

	CALL (Computer Assisted Language Learning)	
	Potentials	Pitfalls
Learner	<ul style="list-style-type: none"> ✓ engagement (motivation, the fun factor) ✓ development of computer literacy ✓ development of creativity ✓ learner-centred approach ✓ development of learners' independence and autonomy ✓ development of learners' responsibility for their learning ✓ limitless sharing of the content among learners ✓ collaborative learning enhancement ✓ lowering learning anxiety level ✓ tool for interaction between teachers and learners ✓ improvement of academic ability ✓ intellectual development ✓ development of self-assessment of learners ✓ development of creativity ✓ development of global understanding 	<ul style="list-style-type: none"> • lack of training • insufficient teacher-learner interaction • financial barriers • problems with availability of computer hardware and software
	<ul style="list-style-type: none"> ✓ study in cultural context ✓ integration of the four skills ✓ development of language skills 	<ul style="list-style-type: none"> • lack of speaking activities
Teacher	<ul style="list-style-type: none"> ✓ development of computer literacy ✓ development of creativity ✓ limitless sharing of the content among learners and teachers 	<ul style="list-style-type: none"> • lack of training • time consuming preparation • insufficient teacher-learner interaction • financial barriers • problems with availability of computer hardware and software
		<ul style="list-style-type: none"> • lack of speaking activities
Computer	<ul style="list-style-type: none"> ✓ visual content ✓ variety of resources ✓ learning without time and place restrictions (so called 24/7 learning) ✓ limitless actualisation of course content 	<ul style="list-style-type: none"> • computer cannot handle unexpected situations (both, technological and educational)
	<ul style="list-style-type: none"> ✓ source of authentic materials ✓ platform for communication in the target language between learners and teachers 	

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