

# INNOVATIVE APPROACHES TO TESTING AND TEACHING ENGLISH FOR SPECIFIC PURPOSES. COMPUTER-ASSISTED LANGUAGE LEARNING VIA COMPUTER-ASSISTED LANGUAGE TESTING

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**Abstract:** Most international organizations, private and governmental institutions across Europe and in Ukraine in particular require professionals with profound knowledge of English that is a lingua franca of the global community. Hence there is a need for new innovative global English assessment and training tools. Computer-assisted language testing (CALT) provides new possibilities in this direction as it may be used both for assessment of candidate's language knowledge and backwash, taking into account its positive effect as a component for blended learning. In this case better and more active development of language skills and competences may be achieved. This research covers the main theoretical and practical approaches to CALT as a way to change the shape and design of teaching tools to improve language skills and competences.

**Keywords:** foreign language, language assessment, CALL, CALT, skills.

## 1 Introduction

### 1.1 Statement of the problem

Interactive teaching methods and new information technologies positively influence the education process. Therefore CALT in our view may be considered as an integral part of Computer-Assisted Language Learning (CALL) as syllabus presupposes management by assessment and control.

Nowadays CALL has become an integral component in teaching and learning English for specific purposes (ESP). CALT and other forms of language assessment in our view is an optimal part of foreign language syllabus. It is the best means to manage the learning process as well as assessment of the learned material. Different forms of language assessment provide not only evaluation but also an important educational function.

Scientific and technological progress is the driving force of the educational process that leads to the introduction of innovative models for teaching foreign languages. The impact of information technology on society and education in mastering foreign languages by means of computer technology has become the focal point in teaching. Though this approach is justified due to several reasons: time economising; interaction that leads to higher motivation, positive influence on psychology (anxiety or even fear reduction), independence (possibility to self-regulate language evaluation and the whole process of doing the test completely). Computerized language provides automatic, objective scoring possibilities.

Modern approaches to teaching demand incorporation of innovative tools. In assessment of Language for Specific Purposes (LSP) multimedia provides "immersion" into the language environment, the ability to feel special features of the language. Multimedia can be used in the combination with other learning styles taking into account the requirements and needs of the target group. Developing speaking skills, target group is able to implement their knowledge, language skills, ability to solve specific communicative tasks in real life situations (Kutza, S.). Modern multimedia educational technologies have replaced static tools. Therefore language teachers apply approaches that encourage thinking, even critical thinking, cognitive process, learning and hence language fluency through immersion into authentic environment.

In this respect test-directed techniques are considered to be the most effective, objective and economical. They increase motivation for learning a foreign language, provide the most favorable, stress-free conditions to identify the level of knowledge of a student of a particular topic or subject both

independently and with the help of a teacher (Manvelova, 2014, p. 133-135).

The objective of our study is to analyse the theoretical background and to present alternative approaches to using CALT in educational process, to prove the multifaceted functions of CALT considering it as an important part of CALL.

There are different approaches to defining a test. It is considered as a method of pedagogical measurement to identify the level of linguistic, communicative and sociocultural competence (Azimov et. al, 2009, p. 311). It is the subject to a high degree of objectivity, reliability and validity. Though CALT provides more technical tools and possibilities to design, modernize and verify the test itself and more opportunities for test-takers (for example stop, precede, self-assess).

### 1.2 Analysis of recent research and publications.

The first work on computerized language testing was published in 1970. It was "Computer-assisted instruction testing and guidance" of Wayne H. Holtzman (Holtzman, 1970). With the evolution of computer technologies, the number of research in this field has increased worldwide. The problem of computerized adaptive language testing is researched in particular by Eggen T. J., Straetmans G. J. (Eggen et. al, 2000), Thissen D., Mislevy R. J. (Thissen et. al, 2000), Wainer H. (Wainer, 2009), Ockey G. J. (Ockey, 2009). The authors stress upon potential advantage of using computer technology in language skills assessment.

The works devoted to language testing and assessment and the CALT comprise a scope of theoretical, methodological and practical approaches that may be grouped in the following way:

- Language testing is viewed as a component of educational process optimization as it is an efficient means for target group activation (Shmatok et al, 2004).
- A test is a way of knowledge assessment that promotes activation of all elements of a teaching system by means of feedback that conditions double nature of control functioning (Babansky Yu., 1989).
- Test is considered not only as the most effective form of knowledge assessment but also a more objective indicator of the degree of mastering linguistic material. Systematic testing stimulates activity and attention of students in the classroom, increases their responsibility (Rogova et al, 1991).
- Methodological aspects for linguodidactic testing are test content criteria, methods of experimental verification of tests to identify the difficulty of tasks, validity and reliability of methods, principles of interpreting the acquired characteristics (Kokkoto V., 1989; Hughes A., 1997; Spolsky B., 2000).
- Typology of tests guarantees better assessment in teaching ESP as it may cover professionally oriented vocabulary, communicative and writing skills. According to the aim there are achievement tests, proficiency tests, aptitude tests and diagnostic tests (Davies A., 1997; Davies et al, 1999).
- Communicative model of language tests that includes grammar sociolinguistic and strategic competence improves their quality (Swain M., 1985).

### 1.3 The purpose of the article

In this respect it is necessary to identify the positive factors that prove the effectiveness of learning by means of multimedia and CALT in particular. They are as follows:

- better understanding of the material;
- motivation to percept new information;

- time economising due to significant reduction of time for repetition drills;
- knowledge remains in memory for a longer period thus it is easier to recover and apply in practice after a brief revision (Rabiichuk L., 2001; 2002).

Today language tutors actively use both classical and modern techniques and approaches to achieve better result in a short time. Language courses do not usually provide long sessions. So the main goal of a target group is to develop communication skills (using clichés, stamps, memorizing dialogues) and to overcome the psychological barrier though, as a rule, at the expense of grammar. Hence there arise new problems in communication though of a different character. Therefore the effective methods of securing knowledge and self-improvement are testing and use of new technologies as "a simulator". They will allow in a short period of time and quite effectively restore and improve knowledge (Rabiichuk L., 2001; 2002).

## 2 The theoretical backgrounds

Methodological literature indicates such forms of assessment as *placement* (carried out by a teacher to define the general knowledge); *summative* (carried out in the end of a course or project) and *formative* (carried out during the course to check on the progress of students and modify future teaching plans, for example quizzes); *self-assessment* (a form of diagnostic assessment that involves students assessing themselves, for example in pair work or to monitor progress); *forward-looking* (a student or a teacher asks those being assessed to consider themselves in hypothetical future situations) (Reed, 2006); *performance-based assessment* (focused on achievement) (Hughes, 1997, p. 9).

Modern educational technologies greatly facilitate the process of assessment. By means of certain programs, students can test and assess themselves identifying their level and spotting mistakes or gaps having a chance to do the exercise again.

Self-assessment is a mental skill that provides training via comparison of the achieved results (on the basis of a syllabus) with the content and relevant external design of (specified) foreign language material. This comparison is carried out on the basis of course material and personal experience to make further self-correction, which is to some extent self-conscious. Naturally, after evaluation (self-assessment and monitoring by a teacher) self-correction is a necessary action that logically completes the whole cycle of foreign language activities (Rabiichuk, 2001).

Supporters of this theory argue that self-esteem has several advantages. First, it increases the student's independence. Secondly, as David Nunan notes (1998), self-evaluation helps students develop critical self-knowledge of themselves as an active agent is involved in the learning process. Thirdly, self-assessment improves metacognition, which, in turn, leads to the development of critical thinking and has a positive impact on learning. Another advantage of this type of assessment is the increased motivation of students, their interest in the process of learning. The next advantage can be considered as an increase in self-confidence, which stimulates students to consciously, as soon as possible, eliminate the gaps in knowledge that they have discovered. Another advantage is the fact that students integrate theory and practice, relating knowledge to their own lives (Kusnic et. al, 1993).

An important aspect of the theory and practice of learning is monitoring, evaluation and assessment of knowledge. Without verification, acquired skills can not be a quality solution to this problem. Therefore knowledge and skills assessment has always been and will be an important part of the learning process, though attitude to it underwent some changes that is determined by the nature of the learning process.

## 3 Methods

There are some requirements to methods of the English language assessment:

1. Commitment. Monitoring should be directed to specific skills and speaking skills. The level of their achievement should be determined and evaluated.
2. Representation. Assessment should cover all the studied material.
3. Objectivity. Control must be very objective to ensure the efficiency of its main functions, namely, feedback and evaluation.
4. System. Control takes efficiency and is justified only if it is regular during the process of learning a foreign language. Systematic assessment and testing are implemented in the study of a particular topic to determine the level of formation of individual skill or ability, mastering of a certain portion of educational material), quizzes (after work on the subject, cycle, at the end of the month), final test (after a certain stage of learning a foreign language) (Rabiichuk, 2001; Backman et. al, 1996).

The dominant function of formative assessment is feedback. According to the results of formative assessment, a teacher receives information about the success or failure of the educational process in a foreign language that enables to promptly adjust the learning activities of students and activities during the learning process.

The function of formative and summative assessment is to determine and assess educational progress in mastering foreign-language skills and competences during a certain period of time or after a certain stage of training.

It should be noted that for the implementation of test tasks, it is not so important to choose the way of assessment but the next stage – to correct mistakes. In this case a student is offered a series of corrective exercises that promote the elimination of errors.

Language testing and assessment is effective and fulfills its function only if organized and conducted with defined particular objectives for assessment. A special approach is needed when determining objectives in verifying the success of learning a foreign language. It is essential in this context to master a foreign language communication, ability to speak, understand speech, express opinions in writing or to read and understand a text in a foreign language (Rabiichuk, 2001; 2002). Therefore, only mastering skills of various kinds - reading, speaking, listening, writing - can and should be the main objective of testing and assessment. They demonstrate the ability to communicate with a partner. To achieve the best result in communication there should be taken into consideration the ability to speak on the topic, lead a conversation, understand a foreign text or writing.

Most researchers conclude that testing is an effective form of control that meets the objectives of the control and ensures effective implementation of its functions in learning a foreign language (Rabiichuk, 2001). The main purpose of ELS is to use feedback and control. Therefore, the more connected testing and educational process, the more effective the educational process.

Linguodidactic test should be prepared according to specific requirements of complex tasks to define the level of linguistic and / or communicative competence of test-takers and evaluate test results on a pre-derived criteria (Azimov et al, 2009, p. 127).

The main quality indicators of a linguodidactic test are:

1. Validity - description of the test, showing what exactly it checks and how well it is measured. Validity means to

- determine the certain level of foreign language skills, and abilities.
2. Reliability – a necessary condition for the validity of the test. Reliability test determines the stability of its function as a measurement tool. Reliability test gives about the same results in every application.
  3. Differential ability – characteristics of the test, indicating the ability of this test to identify underachieving and making it tested, i.e. with sufficient and insufficient skills and abilities.
  4. Practicality – characteristics of a test which determine:
    - a) the availability and feasibility of test instructions and content of tests for the understanding of test-takers;
    - b) simple organization and composition of testing under different conditions;
    - c) simplicity of answer check, determination and evaluation of results.
  5. Cost - description of the test, which involves minimal time, effort and money to prepare (Rabiichuk, 2001; 2002).

Linguodidactic tests are standardized and non-standardized. Standardized test is one which has been passed preliminary by a large number of test-takers and has quality indicators. Preparation of such a test requires hard work and long time. Among the standardized tests are the following: TOEFL (Testing of English as a Foreign Language, USA); PET (Preliminary English Test); FCE (First Certificate in English) (Moskal, 2000).

Non-standardized tests are developed by the teacher. These tests consist of material on specific topics to check the formation of a skill. Non-standardized tests are used for formative or summative assessment to provide feedback in learning a foreign language. Non-standardized tests require the quantitative indicators of quality. But it is advisable to detect in this test too difficult and too easy questions (problems, tasks) and replace them with more appropriate ones. To determine the most difficult or easiest tasks the following method is used: calculation of the percentage of those who completed the test tasks. If only 15% or less test-takers completed the task correctly, it can be considered as difficult. If 85% of the tasks are accomplished, it is easy (Rapoport et al, 1987).

As well language tests can be divided into two groups: knowledge and skill tests. Knowledge tests evaluate mainly the linguistic competence of the test-takers. These are lexical and grammar tests. Skill tests (for testing productive - speaking and writing and receptive – reading and listening skills) are defrinciated according to the form of assessment. There are also traditional (designed to identify general level of language and skills on reading, listening and writing through traditional techniques, such as question-answer tasks); pragmatic (dictations, etc.); communicative (this is basically a test of oral speech).

A test is the minimum unit test, which involves a verbal or nonverbal reactions of a test-taker. Each test task creates a specific linguistic and extralinguistic situation for a test-taker. Test situation provided by the impetus of the tasks can be verbal or nonverbal, that is visible (e.g. charts, tables, image, etc.). Verbal stimulus is the text of the test task. The expected answer can also be verbal or nonverbal (photography, performance). Verbal response may be selective (i.e. presupposes the correct answer among the wrong or alternative ones) or free (Nikolaeva et al, 1997).

The basic issue in the development, design, use and verification process is a form of testing. To date, the most appropriate, effective and time consuming for both administrator and student is a computer assisted test.

Multimedia testing systems combine text, graphic, animated and video materials in the most effective combinations and use simultaneously all channels to transfer information: text, image and sound. The scoring of questions and answers allows to exclude mistakes when the task is misread. Graphics (drawing, diagram, photograph) can be included for questions and answers.

#### 4 Findings

In our view the most appropriate for test constructing is a program "Simulator". It is a versatile system of testing. It is simple to use and requires no special knowledge in software or computer science. This program can be used for self-assessment at home and for class testing in particular. The program allows an unlimited number of topics, questions and answers. It supports five types of questions for various tests. Some music, sounds, images and video may be used. The material can be printed out, exported to files in different formats. This program is effective for designing test for ESP as it may be diversified in a special manner due to the demands of a target group. "Simulator" consists of two parts: "Test Constructor. Editor" that is used to insert and edit the information; "Test Constructor. Simulator" is used for testing itself.

Over a short period of time there appeared a significant number of new forms of testing (simulators), administered (on-line tests, for example TOEFL IBT). Currently such test as APTIS has become rather popular in Ukraine. It is an innovative tool to assess all language skills and language proficiency skills in particular. It has been designed by the British Council and is frequently used for testing employees of international organizations, governmental institutions. Among the advantages of the test are the following: it includes assessment of all skills (speaking, listening, reading, writing). The "Use of English" component is an essential and obligatory one though other components are optional due to the required skills. It is based on socio-cognitive framework. Taking into account the goals of employees of international organizations, speaking and listening sections are important, writing is a must for governmental employees as making documents is an essential part of their work.

Another example of standardized tests is the EuroExam which assesses the knowledge of international English. It contains three tasks for each section. Reading includes Short texts, Scan Reading, Multiple-Choice Reading. Writing comprises different tasks, from Form Filling to Essay Writing. What distinguishes this test is the translation section and speaking tasks that contain Interview, Presentation and Transactional Dialogues that help to assess the candidate's ability to use language functions in different situations. Such types of tasks provide the background for the assessment of proficiency language skills.

Hence both standardized and non-standardized tests may be effectively used taking into consideration the goals of the target group, teacher's vision of the way of assessment for this particular group. The use of CALT considerably improves the way of a testing method and the approach to CALL for ESP as a whole as the demands of the modern society are different and to meet them the approaches to the current education process should undergo constant reform and modernization.

The main didactic principles of assessment in terms of teaching ESP are:

- evaluation of knowledge;
- consistency;
- general and professionally oriented tasks and vocabulary;
- differentiation of knowledge assessment;
- language friendly environment;
- time and space are unlimited because a student can personally set convenient time and pace;
- skills development via thinking and cooperation with the teacher and the group;
- revision is possible, transportability and ease of use.

In this respect the functions of the test according to V. Kokkoto (1989) can be divided into the following general groups:

- Didactic functions of training (involves identifying gaps in students' knowledge) and the function of education (cognitive, disciplining etc.);
- Information functions of the test results (control, research and training).

Among other functions of testing are *motivating* that is conditioned by individual psychological characteristics expressed in the desire of every individual to obtain assessment of the results of certain activities; *educational* function provides feedback as a prerequisite for maintaining the effectiveness and efficiency of the learning process. It involves two subjects – a teacher and a student; *management* is a unique one and is implemented in the process of assessment and evaluation. It is based on the planned educational interaction between a teacher and a student; *correcting* is implemented in two directions: doing correction exercises and achieving adequate control of educational tasks; *diagnostic* function serves to identify the level of knowledge.

In addition CALT is of great importance for the solution of such basic methodological tasks of teaching a foreign language as the process of cognition, assimilation, communicative competence, optimization of foreign language teaching for different target groups and others. The effectiveness of learning a foreign language increases due to the digital interaction that instigates motivation.

The CALT is seen “as a natural evolution in assessment practice” (Dunkel, 1999). Computer is a driving force that makes pedagogy develop a new direction to overcome limitations and disadvantages (Warschauer, 1996). However it is a teacher who is able to activate the complementary relationship between computer technology and appropriate teaching programs (Domingo, 2007).

However, the use of a computer can not replace the teacher or reduce his role. Since, in this case, the teacher acts as an intermediary between the audience and the media that guides the learning process and determines what products will be more or less effective for a particular type of work to achieve better results.

What is really important in application of multimedia and computer technology, is that the teacher acts as the liaison, transmitting knowledge through practice, and the main role is given to the audience, not a teacher. Moreover, this approach is aimed at improving communication skills and avoiding excessive concentration on correcting errors, allowing the audience to participate freely in these types of work, where the students cooperate rather than compete (Domingo, 2007).

### 5 Conclusions and prospects for further research

CALT is one of the most important and effective ways of organizing assessment of a foreign language. Innovations enhance language assessment mode and approaches to language teaching in particular. CALT as a means of assessment creates psychologically friendly language environment, stimulates motivation. Though communicative tests require new design, modernization and innovative techniques in the process of their design to make them more authentic. Tests must meet certain requirements, such as efficiency, availability, reliability, cost effectiveness, validity. CALT in our view should be regarded as some kind of correlation of testing and teaching, testing and learning.

Further theoretical foundations of ELA and CALL in particular, the development of basic requirements for the quality characteristics of the tests are required as they significantly affect the efficiency of testing and training process and should be considered at all stages of their implementation.

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