

A MULTIMEDIA METHOD IN EFL: A CONTRASTIVE APPROACH

PAWEŁ TOPOL

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1. *Introduction*

The last few decades have brought many technological innovations which, in consequence, influenced education. The development of electronics and microelectronics resulted in the production of new devices which - though originally designed for home use, business and entertainment - finally found a way to education. Video and audio players (recorders) are typical examples. They turned out to be particularly useful in teaching and learning foreign languages, where the original or natural sound seems to be of main importance. In the sixties and seventies language laboratories equipped with tape- or cassette recorders and headphones, connected in a system controlled by the teacher, were successfully used both in nationalized schools and other educational institutions in Poland. The career of the video was slightly different. The Department of Education encouraged teachers to use it in class by supplying schools of all levels with video recorders. The equipment was distributed on a massive scale, and soon most schools in Poland had videos - but not so much teaching materials. The production of valuable educational films lagged behind. This was one of the reasons why the video's popularity diminished.

Then came the computer era. A business calculating machine soon turned into one of the most powerful teaching devices ever. Many books and articles have been written on how to apply computer-based technology in the process of teaching and learning. It is now widely accepted truth that this new, versatile device gives more teaching and learning opportunities than any other tool before, since one machine is capable of conveying text, graphics, picture and sound. Another problem is the production of educational software. Computer technology undergoes a continuous process of change. Therefore, the computer of today is far ahead from the one of even two/three years ago. Software producers try to keep up with the rapid change in hardware, especially in commercial use. The reason is obvious: the so called utility programs bring immediate profit and are characterized by wide market

demand. This results in an extremely wide offer of newest versions of word processors, data bases, graphics editors and others. The market response to teaching programs has always been weaker. This may be a reason why the development of educational software has been rather slow.

Computers can be applied to a wide range of educational tasks. They may be very helpful both as an efficient teaching appliance for the teacher, and an attractive self-study tool for the learner. Advantages and disadvantages of using the computer in class have been discussed for years. A general conclusion is that the computer can improve teaching and learning. However, the 'proper' way of using it has always been a problem. It is obvious that there are fields in education where the computer is an indispensable device. There are also fields where replacing traditional techniques with costly computer technology is not justified either economically or pedagogically. The solution seems to lie in the teacher's hands. Like all teaching media, the computer too can bring either positive or negative results, depending on how it has been used by the teacher.

2. Role of the computer

2.1 Tutor, partner, tool

The changing capabilities of microcomputer technology resulted in the changing role of the computer as a teaching and learning device. First home computers were largely used as testing machines. Simple programming languages, limited computer's memory and its capabilities affected educational software.

First programs created for educational use were of two main kinds: programs presenting material and programs testing knowledge. The first group was represented by typical electronic books, where the teaching material was transferred from a regular workbook to the computer's memory and presented on the screen. In many cases the only feature that differentiated the two tools was that the computer program used a special non-linear algorithm which offered the learner special menus directing him to the desired parts of the material. The computer of that time was often described as the *teacher* or *tutor*. Here the learner was dominated by the machine, which guided him through the material, or controlled his achievements by simple testing (Brelńska 1993:120). The preferable technique was drill and practice.

The next stage of developing hardware and software perceived the computer more as the learner's partner than guide. The computer let the learner wander through the program's resources, take tasks and solve problems by himself. In this model, like in typical partnership relations, the learner and the machine cooperated.

The computer of today changed its role to that of a *tool* (Taylor 1980). In many cases computer programs used for education offer enormous amount of knowledge (material), and it is the learner's task to select the information he needs. The so called *multimedia packages*, or in some applications *multimedia encyclopedias*, are good examples of contemporary educational software.

2.2. Multimedia

Education receives from industry regularly updated and modernized versions of hardware and software. An innovation of recent years, which is expected to revolutionize the development of computer technology, is *multimedia*. The term has gained great popularity, both in industry and education. However, it holds two meanings. In hardware/software industry it indicates a technologically modern, multitask device capable of high quality sound, high-speed graphics and video picture. Therefore, *multimedia applications* are often understood as software pieces designed for creation or handling of multiform and multi-purpose product (video sequences, sound effects, hyper-text and others).

In educational technology the term means applying different media in one teaching process. Therefore, *multimedia* refers to methodology of teaching rather than software design. This might be provided twofold:

- in a method consisting in parallel use of media (such methods are very commonly used among teachers), or
- in a multimedia system where the computer controls the other devices connected.

The former is favored by both methodologists and teachers themselves. It is apparent that the use of more than one communication channel makes teaching more effective. That fact probably motivates the teacher to support the textbook by additional materials, e.g. audio or video. The latter requires a special system in which the computer plays a dual role: (i) it contains appropriate software for both teaching and practice; (ii) it controls other devices attached to the system (most commonly a cassette player or/and a video).

3. A new approach

3.1. Theoretical assumptions

The constant transformation of teaching appliances consequently changes the existing ways and techniques of teaching. This inspired me to develop a new method of teaching English to Polish students, which would combine possibly all positive features of a traditional classroom routine with capabilities of modern technology. The term *technology* refers here both to novel hardware/software technological achievements and current trends in the technology of education as a branch of science.

The method is theoretically based on cognitive psychology, with the mental structure as the point of interest. There are three main aspects of the hypothetical model of learning:

- **learning with understanding.** This is the crucial aspect of the model. Symbolically expressed thoughts and ideas refer to knowledge that the learner already possesses, which represent part of his mental structure (see Ausubel, 1968:37);

- **memorizing.** As a strategy it is less efficient and more difficult for the learner. The method is based on cognitive approach, so memorizing seems to be of minor importance. However, there are teaching/learning tasks where some elements of the strategy are strongly justified, e.g. acquiring vocabulary;
- **developing skills,** which practically is the aim of any language teaching method. The final model preferred is a "set of well-developed linguistic skills which allow the student to draw attention to semantic aspects" (Marton 1978:14). As Leontiev (1970:13) puts it, "skill may be achieved in a bottom-up process as a result of imitation, or in an up-bottom process as a result of automation and reduction of knowledge."

The method assumes parallel, simultaneous development of both receptive and productive skills. However, the specific character of the course where the method is introduced requires more attention towards reading and speaking (see: 3.2. *The background*).

Although its theoretical assumptions draw from the cognitive approach to learning, it practically makes use of different kinds of classroom techniques, with drill and practice among them. Teaching practice shows that the teacher ought to apply a wide range of procedures and exercises. This influences both efficiency of the course and its attractiveness to the student. The method makes use of a variety of procedures: from (i) visual, demonstrative presentation of material (especially when new grammatical content is introduced; through (ii) guiding-activating techniques (questions and answers, presenting opinions), and (iii) integrating activities (role play, debate); to (iv) student's independent work supervised by the teacher (short speeches, reports).

3.2. *The background*

Before a more detailed description of the method is given, let us briefly discuss its background. The radical change of recent years in the Polish political system influenced all spheres of life. Breaking up with the model of nationalized industry opened new opportunities before private business. Many new institutions came into being in industry, agriculture and services. Similar change was observed in education. Two processes took place here. Firstly, new educational institutions were formed: private elementary and secondary schools, non-public business colleges or language schools. Most of them developed their own, unique organization schemes and curricula. Secondly, public schools run by state were given more liberty of action in some areas of decision taking. For instance, teachers of foreign languages could almost freely choose workbooks and other teaching materials for the course; they were no longer limited to what had been suggested by the Dept. of Education.

The rapid growth of international trade was another result. Numerous materials for teaching and learning languages were imported to our country, especially EFL. In consequence, it is quite common nowadays that three teachers of English working in the same school use three different coursebooks. Thus, a teacher is sometimes put in an uncomfortable situation, especially in a post-secondary college which admits people from different schools and surroundings.

The method described in the article has been introduced in a school of business and management in Poznań, which faced similar difficulties. The college admits adult, post-secondary candidates and prepares them to run their own private business in the future. It offers two language courses, English and German, but each newcoming student chooses one for him/herself. As the course is two years long, there are two groups of students within a language. The fact that the college serves adult education causes some problems in the organization of language courses. The students' practical knowledge of English, for example, varies between elementary and upper intermediate. It is obvious that organizing good and efficient classes in such conditions encounters serious difficulties. Therefore, as a solution to the problem, the selection criteria for the two groups were changed. Originally, the groups represented the first and second year of study. Now, the criterion of age was replaced by a criterion of language competence. Thus, groups 1 and 2 represented a lower and a higher level of learning, respectively.

3.3. *The method*

The essence of the contrastive approach lies in the use of media. Traditional methods often use them independently. Let us discuss briefly a hypothetical method, which employs three media: text, video and computer. In most cases the textbook plays a central role: the student is guided through the book studying, discussing and practicing the content. The other media are of subsidiary character: they present partially- or even non-correlated material for additional practice merely. The case of the computer is even worse. As it is relatively easy to find suitable video recordings for classroom use (full linguistic courses, clips, parts of films, satellite tv programs etc.) the supply of educational software on the market is relatively small.

The new method uses the following: printed text (workbooks plus many other additional materials), audio recordings, video films and computer programs. The feature which distinguishes it from a traditional approach consists in a mutual relation between the media, which stands in contrast to what has been commonly perceived as *teaching with media* or *multimedia*. The teaching content of the independent aids has been transformed in a way that it overlaps. Some extra, especially prepared materials have been added in order to reinforce the channels of communication:

- printed texts and other materials (audio recordings and video films) are supported by adequate computer exercises,
- audio and video recordings are supported by printed materials,
- ready-made computer programs are also used.

3.2.1. *Printed texts*

A wide range of printed materials are applied along the course. There are two coursebooks used interchangeably for each group:

- "We Mean Business" by Longman, and "Headway Pre-Intermediate" by Oxford for group 1;

- “We’re in Business” publ. by Longman, and “Before You Start Business” by Państwowe Wydawnictwo Ekonomiczne for group 2.

Thus, there are four textbooks altogether, and each of them is used with tape recordings. The only coursebook without officially published tapes was “Before You Start Business”. It required preparing such recordings by the teacher. There are also other texts used: teaching and learning materials developed by the teacher. They are usually exercises on grammar and vocabulary especially prepared for Polish students learning English.

Almost all the texts appearing during the course are supported by suitable computer exercises developed by the teacher. The aim was to give the student another opportunity to revise, practice and test the content of textbooks. They are mainly translation exercises, filling blanks, multiple choice and cloze tests.

Apart from ready-made, officially published printed resources, a number of other texts are applied. They were developed especially for the course to support the other media used, like the video and audio.

3.2.2. Video and audio

Different video recordings are used throughout the course. However, there are two which appear regularly every few classes: “Look Ahead” for group 1, and “Starting Business English” for group 2. Both are tv courses by BBC and are supplied with textbooks, but the students are not forced to use another coursebook. Some suitable printed vocabulary lists and exercises have been prepared as additional resources. Audio resources are used in a similar way. Both the video and audio materials have been supported by appropriate computer exercises (see: 3.2.1 Printed Texts).

3.2.3. Computer

The computer plays a triple role. Firstly, it serves as a source of additional exercises to the other media and materials employed in the course. Secondly, it offers other, autonomous software as subsidiary study and practice. They are usually exercises in syntax and vocabulary. Thirdly, the computer is used in a student-to-student practice module, which will be described later on in the paper.

Such a model of teaching which employs the computer as an integrating part to all the other components used throughout the course requires constant preparation of new computer-based exercises and updating the old ones. So far as many as 200 have been developed, each of them consisting of 10-30 entries. While this is an effortful task, it is worth mentioning that the set of exercises and other materials was being formed gradually, together with the development of the entire method. The following computer programs are used as integral part of the course (in alphabetical order):

- *English Teacher* by Nahlik Soft: multiple tests on grammar and vocabulary;
- *PopEnglish* by Awangarda: multiple tests on vocabulary, grammar and phonetics;
- *Story Corner* by Westermann: cloze test exercise (allows to input own texts);

- *Grammar Tree* by Wit Soft: multiple exercises on grammar;
 - *Visit* by P.Topol (unpublished): an interactive-video software package;
 - *SuperMemo* by SuperMemo World: a self-training multipurpose package.
- Some other software is used occasionally, when required.

The method employs two extra features: an integrated multimedia software package designed for TEFL and a computer-based student-to-student practice module for practice and verification.

The former, called *Visit*, is a package integrating the computer and the video. It is to be run with a set of video-player and microcomputer connected by a special interface. The pre-sale version has been developed for Amstrad-Schneider microcomputer CPC 6128 and a regular medium-class video player. A multi-version for IBM PC is being prepared. The name “VISIT” suggests topics concerning social situations. The student is to get to know, watch and distinguish between different ways of behaving in a number of social situations. The linguistic material in the package contains:

- a) video recording (16 scenes grouped in 2 stories, 4 parts each, 2 language versions each),
- b) dialog simulation exercise (video visual practice),
- c) dialog texts, typical vocabulary and phrases in computer's memory for check and practice,
- d) two computer exercises (multiple choice: choosing phrases appropriate to social situations of formal and informal language; and dialog building).

The latter is theoretically based on Keller's plan. Students use a specialized program (*SuperMemo*) for collecting, practicing and testing linguistic data throughout the course. They build specific databases by inputting data which they assume either worth remembering or difficult. The program calculates the forgetting curve and estimates optimal terms for repetitions of the learned items. In addition to self-controlling, students exchange the bases at times. This way each of them receives a new base which serves as a testing element.

3.4. Integrating activities

In a traditional model multimedia often coexist as separate components. After the students have covered a certain part of material, the teacher applies a new device, e.g. the computer, for extra practice. However, it rarely happens that the computer is supplied with appropriate software adequate to the unique character of: the course, the problem in question, and the particular group of students. Thus, the student is given not only additional practice, but also extra material to study. This may lead to a conclusion that in a traditional course media are often used independently, in a *parallel* way. The new model assumes a mutual relation between the aids, which is more than mere coexistence of teaching devices. Here, media are used interdependently, as *intermedia* rather than *multimedia*.

Let us discuss a short example. The students have just studied another unit of their textbooks, which concerns negotiating deals. A few typical behaviors of a

natural situation have been discussed in class. Then the teacher decides to devote some more time to one of them, e.g. requesting. The following support is possible:

- **text.** There are some additional, printed exercises designed to practise conversing (e.g. role play). The students are divided into subgroups and prepare dialogs trying to negotiate the best deal. Emphasis is put on requesting;
- **video.** The "Visit" package is used. The students select appropriate dialogs from the dialog menu, choose between formal and colloquial English, and watch the scenes. The computer program allows to pause or stop the tape at any time, or repeat the last few seconds of the conversation. Then, some parts of the dialogs may be discussed in class. Each of the scenes is supported with a script, which may or may not be given to the students (according to the teacher's suggestion);
- **computer.** There are some computer exercises and tests attached to the "Visit" package. These are based on the scripts to the video scenes. The teacher can make his/her students either wander through the database and look for appropriate phrases, or do a dialog-building test;
- **traditional CALL.** The students may run an autonomous computer program supplied with special exercises/tests based on the material taken from the coursebook or additional texts.

Specific teaching procedures depend very much on a particular classroom situation. Therefore, it is the teacher to decide whether:

- all the supporting media are necessary for the teaching tasks;
- only some of them are suitable, or should be used in a limited range; or
- the coursebook is enough and there is no need to involve extra activities.

3.5. Activation

One of the main tasks of most foreign language courses is to activate learners in order to master skills. Methodology of teaching gives a number of techniques to achieve it. They are most efficient if the group of students is uniform and not too big. The bigger the group is, the more difficult it is to control it. Similar interdependence takes place in case of cohesion. If all the learners represent similar linguistic competence, it is easier for the teacher to apply activating techniques. This refers to all three levels: individual student, group work and the whole class.

Applying the computer to support other aids has two functions. First of all it allows each student to work with different parts of material at his own speed. Individual pace is commonly regarded as one of the most advantageous features of the computer as a learning tool. The teacher can organize his students' work with the computer in different ways. Let us take just one example. Students run a program and are given a certain period of time to study a selected part of material. Those who learn fast can be directed to other tasks if they finish earlier. Those whose individual tempo of learning is slower, or whose linguistic competence does not allow them to work as fast as the others, can study the given material more thoroughly. The other function is a natural consequence of the first one. A

poorer student feels more comfortable when he/she is given enough time to practice. Then, if the teacher arranges an activity in class, based on what has been studied, the student should feel more encouraged to take active part.

4. Conclusion

Making the teaching/learning process more efficient is a task which involves not only theoreticians or education designers but also educators themselves. It is a comfortable situation when the teacher has a wide range of aids at disposal, and his/her creative activity is limited to choosing the appropriate ones. Reality shows that the teacher too is expected to shape the model of teaching or adapt it to specific conditions of the course. The computer in class is often understood as "just another tool." However, there is more that the computer can do. Apart from extra exercising, it can be used to assist other aids. The method presented above applies the computer to three main tasks: (i) it possesses ready-made software for both practicing and testing, (ii) it offers additionally programmed exercises as supplementary material to the other components of the method, (iii) it serves as a verification tool for students themselves.

Although development efforts similar to the one reported in the paper usually encounter many difficulties, such efforts should be encouraged. The question is whether an innovation will bring the expected result. The multimedia method has been put to practice in a business college in Poznań. Now an empirical study of its efficiency is being prepared. As the aspect of individual learning seems to be significant for this particular case of adult education, and the group of students is relatively small, a case study is proposed. Another reason for such a procedure is the cost. The model assumes using numerous resources prepared especially for the course. It also requires a long-term study in order to verify both the method of teaching and the tool itself. Therefore, the experiment is to serve as a pre-verification stage. If it occurs advantageous for the teaching/learning process, a wider study can be undertaken.

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