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TYPES OF EXERCISES AND ACTIVITIES USED IN TEACHING ENGLISH FOR IT VOCABULARY

General remarks on ESP idiosyncrasies

ELT can commonly be divided into English for Specific Purposes (ESP) and English for General Purposes (EGP). ESP is generally regarded as a learner-centred approach to teaching English as an additional language, which focuses on developing communicative competence in a specific domain, such as academics, accounting, business, IT, medicine, engineering, tourism etc.

The definitions of ESP as a conceptual term appeared in the literature only in the 1960s.

Hutchinson and Waters (1987) broadly defined ESP as "an approach to language teaching in which all decisions as to content an methods are based on the learners' need for learning" (p. 19).

According to Strevens (1988), ESP is designed to meet learners' specific needs by choosing content from particular disciplines and using activities, syntax, lexis and discourse suitable to these activities. (p. 1-2)

He also makes a clear-cut distinction between ESP's absolute and variable characteristics. Therefore, he considers as absolute characteristics the following:

- designed to meet specified needs of the learner;
- related in content (i.e. themes and topics) to particular disciplines, occupations and activities;
- centred on the language appropriate for those activities in syntax, lexis, discourse and semantics;
- in contrast with General English.

According to the same author, the variable characteristics of ESP may be:

- restriction to the language skills to be learned (reading only)
- use of no teaching methodology.

Dudley-Evans and St. John (1998) also put forward a list of absolute and variable characteristics of ESP, the absolute characteristics being the same as those mentioned by Strevens, whereas the variable ones are more numerous:

- ESP may be related to, or designed for, specific disciplines
- ESP is likely to be designed for adult learners, either at tertiary level institution or in a professional work situation
- ESP is generally designed for intermediate or advanced students
- ESP course assumes that learners have some basic knowledge of the language system, but it can be used for beginners, too. (pp. 4 – 5)

These definitions make it clear that the learners' specific need is the foundation on which the entire edifice of ESP is established. Unlike general English, ESP has to blend both interpersonal communication skills and academic communication skills effectively and naturally. It is the challenge of the ESP teacher to integrate all these skills in an adequate manner in the ESP course by balancing and blending structures, lexis and discourse into the course.

There are many other features that are also conspicuous in an ESP course. Firstly, ESP is a multidisciplinary activity and, therefore, it is vital to understand how written and spoken texts work in a particular discipline or profession. Secondly, it uses authentic materials, which are used both as a vehicle of information and as a linguistic object. Thirdly, ESP exploits learners' academic skills, knowledge and professional experience. Fourthly, ESP teaching methodology is different from general English teaching methodology. For example, role play, case study, project work and task-based teaching are mostly used in ESP classes.

In ESP, students approach the learning of English through a field that is already known and relevant to them, being able to use what they learn in the ESP classroom right away in their work and studies. The ESP approach enhances the relevance of what the students are learning and enables them to use the English they already know, since their interest in their field will motivate them to interact with speakers and texts. ESP masterfully combines purpose, subject matter, motivation, context and relevant skills. In other words, it assesses needs and integrates motivation, subject matter and content for the teaching of relevant skills.

Teaching English for IT vocabulary

Technology has developed at an accelerate pace over the last years and IT has become an essential field for students in order to boost their employability chances. On the other hand, nowadays, being computer literate is vital, as the illiterate of the future will definitely be computer illiterate. Hence, the great importance of English language skills and vocabulary in the context of information technology.

In this subchapter, the focus will be laid on various types of exercises and activities that could be used in order to teach English for Information

Technology vocabulary. The exercises will be divided into three categories: warm-up exercises, activities used for teaching IT vocabulary and exercises used for practising newly-acquired terminology.

The objectives observed during these IT vocabulary–centred classes will be the following:

- understanding texts situated in the context of computer science that students may come across in their day-to-day future professional life;

- present scientific information in spoken and written English in a variety of professional situations (e.g. describing data, presenting at a conference, writing reports, describing graphs etc.);

- use concrete, relevant and specific vocabulary in the field of computer science.

Warm-up exercises

Warm-ups or icebreakers get students to begin thinking and focusing on English, they provide a transition into the topic, activating pre-existent knowledge and may even get students to use (or consider) some of the vocabulary important to the lesson. Here are only a few of the activities, which may be used as ice breakers, which set the tone of the lesson and raise energy levels: hangman, brainstorming, guess the word or the alphabet race.

Hangman

During this warm-up activity, the teacher writes an IT-related word or an abbreviation on the blackboard (for instance, a single word like *spreadsheet* or the meaning of an abbreviation like *BIOS*, i.e. Basic Input Output Supervisor) and the students try to guess it by suggesting letters. The word/abbreviation to guess is represented by a row of dashes, representing each letter of the word/abbreviation. If the students suggest a letter which occurs in the word, the teacher writes it in all its correct positions. If the suggested letter does not occur in the word, the teacher draws one element of a hanged man stick figure. The students may, at any time, attempt to guess the whole word/abbreviation. If the word/abbreviation is correct, the game is over and the student who guessed it is the winner. If the hanged man stick figure is almost complete and the students haven't guessed the word/abbreviation yet, the teacher may help them by giving the definition of the respective word or abbreviation (e.g.: *spreadsheet* = an interactive computer application for organisation, analysis and storage of data in tabular form; *BIOS* = non-volatile firmware used to perform hardware initialization during the booting process).

This ice-breaker may be used for vocabulary related to any IT topic, which is to be taught. Also, it may be used for teaching IT abbreviations.

After the word/abbreviation is guessed, the teacher may divide the students into three or four groups. Depending on the subject of the lesson, each group must think of a word. Then, a spokesperson for each group is chosen, who comes to the blackboard and replaces the teacher. The other groups must guess the word. The group that guesses most words is the winner.

Hangman represents a very useful activity for any vocabulary-related class, in which students may exchange information about unknown words from the IT domain. It is also meant to be fun and relaxing.

Brainstorming

A way in which the teacher could liven up the introduction of new IT vocabulary could include brainstorming. During this activity, the teacher writes either a word or an abbreviation on the blackboard (e.g.: *clipboard*, *mainframe*, *to merge*, *LCD*, *WAN*, *HTML*) and invites students to come up with definitions in English for the respective words. If the teacher decides to use an abbreviation, students must say what each letter stands for. Also, the teacher could also ask students to make sentences in which to include the computer-related term or abbreviation.

Brainstorming is intended to reduce social inhibitions among group members, stimulate idea generation and enable students to use both their previous general English knowledge and their domain-related information in order to provide definitions.

During brainstorming, the teacher has the role of correcting, combining and improving the sentences or the definitions given by students. If the students do not know a word or an abbreviation, the teacher gives hints. If the students are still not able to define the word or to say what the abbreviation means, he/she provides them with the definition or the meaning of the abbreviation. The teacher begins with easy words or abbreviations and then increases the level of difficulty.

The same activity, having the same rules, may be performed in small groups, of three or four students, in which one student thinks of a word or abbreviation and the other two or three try to define the word and form a sentence with it or say what the abbreviation stands for

Guess the word

During this warm-up exercise, one student comes in front of the classroom, thinks of a computer-related term (the term must be connected to the topic of the lesson, which will be announced beforehand by the

teacher) and writes it on a piece of paper. The teacher then invites the other students to ask yes/no questions (questions to which the answer must be either yes or no), trying to guess the word. If they do not manage to guess the word in three minutes, then the teacher gives them a hint. The student who guesses the word is the winner. He/she comes in front of the classroom and the game repeats. The game may be repeated two or three times. Example of yes/no questions may be: "Is it a software or hardware component?", "Is it round/square?", "Is it part of the CPU?", "Is it a programming language?" etc.

This game is extremely helpful both for exchanging knowledge of computer terms and for being able to ask questions or give definitions.

The alphabet race

For this game, students work in groups of three. Each group is given three letters and has to come up with as many computer-related words as possible, which begin with those three letters. They are given five minutes to complete the task. The group that has the most words is the winner. At the end of the game, the teacher reads out the words from each group and makes sure that everybody in the class knows all the words.

To increase the level of difficulty of this game, the teacher may also ask students to give the definitions, in English, of the words they managed to write in the given five minutes.

Activities used for teaching IT vocabulary

Further on, we shall focus on the student-centred approach to learning, also termed interactive teaching, in which teacher and students play an equally active role in the learning process and in which the teacher's primary role is to coach and facilitate students' learning and overall comprehension of material. This method stresses the subjectivity of learners and the self-construction of knowledge.

In this sub-chapter, we shall discuss some participatory vocabulary teaching strategies, employed in the English for IT class, and their implications for effective vocabulary acquisition, such as: contextual analysis, vocabulary finder, mini lectures, followed by a cloze exercise, vocabulary BINGO or word expert cards.

Contextual analysis

This vocabulary teaching technique involves inferring the meaning of unfamiliar words by scrutinizing the text surrounding them. The teacher may assist the students in learning to recognize clues and to guess word meaning from context. He/she may also help students by giving the definition of the word or its synonym, by restating (using other words,

phrases or sentences to provide meaning of difficult words), by giving examples, by means of contrast (with the help of antonyms), by relying on the students' background knowledge or by trying to focus students' attention on the surrounding words, which could help them infer the meaning of a word.

Vocabulary finder

This is a problem-solving activity that involves a list of words that the learners try to locate in a square or rectangular maze of letters. The difficulty of these puzzles is determined by the number of lexical items to be located and the quantity of the unrelated alphabetic distracters (random letters). The purpose of this activity is for students to recognize terms related to a specific IT topic even if they do not know their meaning. The role of the teacher during this activity is to explain any unknown words. A follow-up activity may be a fill-in exercise, the blanks being represented by the newly acquired words, whose purpose will be that of consolidating the terms that have been taught.

Below is an example of an IT vocabulary finder for pre-intermediate students. The subject of the puzzle is *Parts of the computer*. All the words go across or down. There are no diagonal or backward words. The puzzle is taken from http://www.esolcourses.com/content/ict/vocab/computerwords/computer-words-wordsearch.html. The words that must be identified in the puzzle are the following: computer, desktop PC, tower PC, keyboard, mouse, monitor, screen, printer, scanner, headphones, speakers, cables, laptop, netbook, tablet, mobile, smartphone, workstation, CD/DVD drive, compact disk.

X	N	B	Y	Z	N	V	M	L	W	G	T	K	N	Y	F	Q	H	I	C
C	O	W	T	A	B	L	E	T	K	Z	H	S	M	I	F	A	X	D	A
R	Y	I	L	E	R	J	Z	Z	J	S	C	A	N	N	E	R	D	E	B
D	E	S	K	T	O	P	P	C	L	U	T	L	G	R	A	L	I	Y	L
N	N	W	F	U	T	C	C	D	D	V	D	D	R	I	V	E	H	R	E
K	E	B	C	G	O	G	A	I	V	Q	H	O	Z	F	U	B	V	K	S
D	T	W	J	E	W	C	O	M	P	A	C	T	D	I	S	C	L	S	P
Q	B	V	H	Y	E	Z	N	A	G	P	T	O	U	E	E	H	F	R	E
Z	O	S	R	N	R	K	E	Y	B	O	A	R	D	S	B	Z	I	X	A
M	O	U	S	E	P	J	C	S	U	J	Q	O	S	B	L	W	H	D	K
X	K	Y	F	B	C	H	K	X	P	R	O	F	K	M	G	O	M	T	E
N	X	G	T	T	X	S	G	U	J	F	F	R	Z	W	P	R	O	Q	R
U	K	X	L	K	C	O	M	P	U	T	E	R	I	H	A	K	N	S	S
Y	H	D	W	H	I	O	H	E	A	D	P	H	O	N	E	S	I	Y	B
V	O	Z	C	S	Y	L	R	K	T	O	N	S	B	C	O	T	T	R	A
B	U	P	R	I	N	T	E	R	O	K	O	U	S	X	X	A	O	M	C
U	B	M	E	U	G	I	T	W	X	L	A	P	T	O	P	T	R	M	V
F	Y	N	X	C	F	S	C	R	E	E	N	Y	G	S	M	I	M	N	I
P	M	O	B	I	L	E	M	N	T	H	D	U	C	W	G	O	F	W	H
O	O	Q	T	Y	Q	X	B	S	M	A	R	T	P	H	O	N	E	A	M

Mini lectures followed by a cloze exercise

The teacher gives a short lecture, which is as contextualized as possible, to provide students with opportunities to acquire new vocabulary. Demonstrations are also particularly effective. If possible, the class may take place in the computer science laboratory. Following the presentation, students are provided with handouts containing a sort passage from the mini lecture. The gaps are represented by new words from the respective unit. For this type of activity, it is also appropriate, after the students filled in the gaps, to re-read some parts to them while they follow along and fill in the blanks they didn't manage to fill.

By means of this exercise, students learn useful vocabulary in context, fact which makes them remember it easier since they can connect it to a specific area from computer science.

Vocabulary BINGO

This game makes learning new vocabulary fun. After reading the text from a new unit (for example, *The Processor*), the students are given pre-

printed bingo grids and are asked to fill out both the unknown and unknown vocabulary from the text, in any pattern. For the text from *The Processor*, they may write words like: CPU, mainframe, transistor, IC, relay, vacuum tube, logic gate, SSI, LSI, MSI, to fetch, program counter, ISA, ALU, loops etc.

Afterwards, the teacher calls out a list with difficult words from the text. The student who has the word called out by the teacher on his/her card and knows a synonym, a paraphrase or a definition of the respective word, raises his/her hand. The first student, who has all the words on his/her list called out by the teacher, and who gave a synonym/paraphrase/definition for all of them, is the winner.

Word expert cards

Each student in the class takes the responsibility for thoroughly learning three words from a new unit and then teaching them to peers. Each "word expert" constructs a card for each vocabulary word using a teacher-approved rough draft of the word's definition, a synonym, a short context in which it may be used and, if applicable, an illustration. Then, the teacher divides the class into pairs. In each pair, students present their cards to each other and they exchange cards, thus facilitating the learning of many new computer-related words.

Exercises used for practising newly-acquired terminology

Practice exercises are vital for consolidating terminology. Further on, we shall present some activities that may be used for reinforcing IT vocabulary issues.

Fill-in exercises

These are the most commonly used type of exercises for practising newly acquired terminology, in which learners have to replace word missing form a text. Below, there is an example of such a fill-in exercise, which may be employed when revising IT vocabulary. The text is about input devices:

Fill in the blanks in the text below:

To enter data into a computer there are several 1) …… 2)……. The most common of these devices is the 3) ……. It is just like a 4) …… and it can be either 5) ……. or 6) …… depending on the country you live in. Most keyboards have several sets of 7) ……: the main set is the alphanumeric keypad with all the alphabet letters, figures and a few other keys such as the 8) …… or caps lock keys; it is actually the same set which you find on a 9) …… typewriter.

Besides this main block there are other 10) …… which are specific to computer keyboards: the numeric keypad and the 11) ……. 12) ……. Instead of using the keyboard you can also use a 13) …… which helps you move the 14) …… on the 15) …… and select functions by 16) …… the button(s) situated on the 17) …… of it. 18) …… 19) …… and 20) …… 21) …… also belong to the 22) …… 23) …… family but usually serve specific 24) ……: the former are used to read 25) …… 26) ……, the latter to 27) …… an area on a map displayed on the screen, for instance.

Matching exercises

For this type of exercise, students have to match a number of computer-related terms with their definition, after previously having studied their meaning.

An example of such an exercise may be:

Match the following words (1 – 10) with their appropriate definitions (A – J):

1. Bulky	A. a computer that can be carried easily
2. Silicon chip	B. an essential component of a microprocessor
3. Transistor	C. to recover or regain lost information or data
4. Reliable	D. condition or quality of being true, correct or exact
5. Scanner	E. taking up a lot of space
6. Laptop	F. a thin, small disk
7. To etch	G. you can count on it
8. To retrieve	H. the type of technology that made miniaturisation possible
9. Wafer	I. an automatic electronic means of inputting data
10. Accuracy	J. to engrave as to form a design

Consecutive translation

In this type of activity, the teacher asks the students to divide a piece of paper into two vertical columns and, then, he/she reads a text to them. The first reading is intended to familiarize students with the topic and the general idea of the text. After this first reading, the teacher reads the text once again, but at a slower pace, so that students can translate it at the same time. The students write the translation in the left column. The text must contain previously taught vocabulary. After they finish translating the text,

the teacher checks the translation. Afterwards, the students are asked to translate the text back into English in the right column. Here is an example of a text that could be used for this activity:

> Compressed data are transmitted through computer networks represented by interconnected groups of computers and intelligent peripheral equipment, by telephone lines, microwave relays and other high-speed communication links. The main purpose of a computer network is to exchange data and share equipment. By the 1990's, worldwide communication became possible by internetworking, the interconnection of multiple networks by means of (with the help of) so-called gateways. Networking has been developed at all levels, from local to international, in various sectors of society. Government organisations use computer networks for rapid retrieval of information from databases at central locations, while banks and retail merchants use them for fund transfer or credit verification.

Role play – job interview

Role play is a participatory method, which may also be used for revising newly-acquired vocabulary, in which students are asked to simulate a job interview. Three students prepare a set of ten questions, out of which at least six should be specific and job-related ones, which will be asked to all candidates. The job for which candidates apply may vary, depending on the topic of the studied unit, from programmer or web designer to network engineer or application developer. The candidates must prepare a short CV to present to the employees.

Case study

The use of case studies can be a very effective classroom technique. They may come in many formats, from a simple "What would you do in this situation?" question to a detailed description of a situation with accompanying data to analyse. Most case assignments require students to answer an open-ended question or to develop a solution to an open-ended problem with multiple potential solutions. An example of a case study, in which students can revise vocabulary, may be: Some important data is missing. Explain to your boss what happened and present some solutions to retrieve it. Use the following words: to share, to check, to retrieve, to free up, to delete, to damage, CPU, to troubleshoot, to reside, mainframe. For this activity, students are divided into groups of four and, after deciding on measures to be taken, the spokesperson from each group comes in front of the class and presents the solutions of the group to which he/she belongs.

Debates

Besides being an extremely useful tool for revising vocabulary, debates heighten students' critical thinking and collaborative learning skills. They may mainly be used for upper intermediate and advanced students.

The debate starts with a topic, as follows: "The best aspect of the Internet has nothing to do with technology. It's us. Getting in touch with one another, communicating is the most important aspect of the Internet."

The students are grouped in three teams; one team will be in favour, one will be against the proposed topic and the third group will be the judge that will decide which side presented a stronger case. The speakers follow a set order. First, the affirmative group receives two minutes to present their case to the audience. The negative group then receives two minutes to present their case. After both sides have a chance to speak, both teams receive two minutes to prepare a rebuttal and summary. The order of speech is reversed now and the negative side presents their rebuttal and summary for the first two minutes. The last to speak is the affirmative team, who then presents their rebuttal and summary for two minutes. The debate is now concluded. The winner is the one who has presented the strongest case.

Conclusion

The participatory teaching methods, which have been outlined in the present study are central to vocabulary teaching and learning. They are motivating, relaxing and fun and that is why, in our opinion, the idea behind this type of methods is that students learn more effectively when fulfilling tasks which contain different problem-solving elements. The teacher's role in this type of vocabulary teaching technique is to encourage, facilitate, regulate and monitor students.

Results are great, students can acquire many IT terms in a relatively short time and such knowledge is well-remembered.

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Types of Exercises and Activities Used in Teaching English for IT Vocabulary

Abstract: *The ability to master specialised terminology in English is of an utmost importance in selecting candidates for employment, thus making it a primary concern for ESP teachers as well. Knowledge of a foreign language opens new prospects of mobility and collaboration for professionals in the modern world. Educators recognize the increasing role that English for Specific Purposes plays in the professional development of future scholars and try to introduce this subject at tertiary level. The present paper focuses on teaching English for IT vocabulary and outlines a number of useful exercises and activities that could enrich first year computer science students' grasp of different terminology from various IT domains such as: input and output devices, the processor, the Internet, databases, programming languages, neural networks, programming languages, web design etc. These exercises represent the result of thorough research regarding the curriculum for Automatics and Computer Science Faculty, accumulated in more than ten years of teaching computer science students, and they are intended, on the one hand, to familiarize students with different topics they will study during the four years of study in higher education and, on the other hand, to provide them with a framework of general information that any future IT specialist must acquire. The approach used would be student-centred learning, whose purpose is to develop learner autonomy and independence and which encompasses methods of teaching that shift the focus of instruction from the teacher to the students, who have a primarily active role.*
Keywords: *ESP, English for IT, student-centred learning, computer science terminology, participatory teaching methods*