

## Teaching Abstract Subtechnical Vocabulary

PÁL HELTAI

Teacher Training College, ELTE University  
Kazinczy u. 23-27, Budapest  
H-1075 Hungary

### ABSTRACT

*This paper explores various aspects of the teaching of abstract subtechnical vocabulary. Vocabulary items in this category are very difficult to learn and teach, while they are essential for reading comprehension (especially in an ESP/EAP context) as well as for advanced-level writing and speech, where a certain level of lexical sophistication is part of communicative success. It is argued that the learning of abstract vocabulary is more difficult in that such items are rather difficult to associate with a visual image and sense relations such as hyponymy and antonymy are less important for them than for concrete vocabulary. Apparently, the most important relation for such words is the collocational relation, and teaching abstract vocabulary should be synonymous with teaching collocations. Students must be made conscious of the importance of multiword units in general, and of collocations with abstract words in particular. While the present paper is not primarily concerned with a systematic description of the methodology that can be employed, it does suggest various procedures suitable for practising abstract vocabulary. Vocabulary tests and the use of L1 equivalents are discussed.*

KEY WORDS: LSP, Subtechnical, Vocabulary Acquisition

### RESUMEN

*En este trabajo se revisan algunos aspectos de la enseñanza del vocabulario técnico y abstracto. El léxico de este ámbito es generalmente difícil de aprender y enseñar, aunque sea esencial para la destreza de comprensión lectora (especialmente en contextos de enseñanza de lenguas para fines específicos) así como para la destrezas de expresión escrita y oral, en vista de que cierto nivel de conocimiento léxico es un componente fundamental del éxito comunicativo. Se ha planteado que el aprendizaje del vocabulario abstracto es más difícil porque es complicado asociar cada unidad léxica con imágenes visuales y porque relaciones semánticas como la hiponimia o la antonimia son menos relevantes en este caso que en el del vocabulario concreto. En este sentido, se ha propuesto que el tipo de relación semántica más importante para este léxico es la colocación y, por consiguiente, la enseñanza del vocabulario abstracto debe ser sinónimo de la enseñanza de las colocaciones. De este modo, los estudiantes deben adquirir conciencia de la importancia de unidades superiores a la palabra aislada y de su colocación junto a voces abstractas. Aunque este trabajo no es una descripción sistemática de la metodología que se puede aplicar a la enseñanza del vocabulario abstracto, se sugieren algunos ejercicios adecuados para su puesta en práctica: especialmente tests de vocabulario y el empleo de equivalencias en la L1.*

PALABRAS CLAVE: Lenguas para fines específicos, Adquisición de vocabulario, Vocabulario técnico

## TEACHING ABSTRACT SUBTECHNICAL VOCABULARY

### I. ABSTRACT WORDS

Teaching experience and experimental evidence suggest that words with an abstract meaning are more difficult to acquire than words which refer to concrete entities. Words like *adjust, adapt, adopt, admit, affect, attain and available*, usually referred to as 'subtechnical vocabulary' in ESP and EAP literature, present the learner with a difficult task indeed. The term 'abstract' or 'abstract subtechnical' is used in this paper to emphasize the fact that subtechnical vocabulary includes both abstract and concrete items (*capacity* or *density vs. apparatus* or *acid*) which may exhibit differences from the point of view of learning difficulty. Apparently, it is the abstract items that give learners the greatest difficulty. The term 'abstract vocabulary' will be used in this paper as a shorthand for 'abstract subtechnical vocabulary'.

It will be convenient to summarise here the characteristic features of abstract subtechnical vocabulary. *Adjust, adapt, adopt* and similar items are low-imagery words: they are very difficult to associate with a visual image. Their meaning is rather general and difficult to define. Their sound structure is often similar to other abstract vocabulary items, so they are easy to confuse (cf. the concept of *synforms*: Laufer, 1985 and 1991). Phonemically there is nothing unusual or striking about them, so associations on the basis of sound structure which sometimes helps the acquisition of infrequent words like *budgerigar* are difficult to form. Most items of this type belong to the category of verbs; from the point of view of register, they tend to belong to formal vocabulary.

### II. WHY SHOULD WE WANT TO TEACH ABSTRACT VOCABULARY?

The obvious answer is that such vocabulary is essential for reading comprehension, especially in an EAP situation. Knowledge of vocabulary in general has been shown to be the single most important factor in reading comprehension (Nation and Coady 1988:97), and knowledge of abstract subtechnical vocabulary has been shown to be of particular importance in reading academic texts. Even though most of the information in LSP texts is carried by technical terms, the fact that subtechnical vocabulary covers a high percentage of all technical texts make it vitally important for reading comprehension (cf. Nation 1988). Guessing, which is encouraged as a necessary and useful strategy in understanding general texts and fiction is less acceptable in reading an academic text for information. Abstract

vocabulary is even more important for advanced-level writing and speaking skills. The mere fact that one can get oneself understood cannot be regarded as successful communication in situations where a certain level of lexical sophistication is a prerequisite of communicative success.

One of the most common mistakes foreign language learners commit, even at the advanced level, is mixing styles: using familiar instead of formal style and vice versa. However, the use of familiar or colloquial instead of formal vocabulary is far more common than the other way round. One reason of course is that learners have little experience with abstract vocabulary, which is so typical of formal academic writing.

An important feature of abstract vocabulary is that it comes in collocations. *Results* are *obtained*, but *goals* are *attained*; *hypotheses* are *presented*, *changes* are *introduced* and *questions* are *posed*. Collocations are relatively easy to understand in a given context, and as a result, learners usually fail to notice that they are faced with a learning task. Most collocations are just not salient enough. While comprehension of academic texts, as noted above, often hinges on knowledge of technical terminology, it may also depend crucially on abstract subtechnical vocabulary. In production the tendency will be for the learner to transfer their L1 collocations into the L2. A case in point is Hungarian *foglalkozni*, which is more or less equivalent to English *deal with* (a question, a problem, etc.). However, the Hungarian verb has a much wider distribution than its English counterpart. Hungarian parents, when they go home, very often '*foglalkoznak a gyerekekkel*' [*'deal with the child'* = they spend some time talking to him/her, ask him/her about school, maybe look at his/her homework, etc.] , so in the English compositions of Hungarian learners parents always '*deal with the child (or the baby)*'. In a similar vein, in academic texts produced by Hungarian learners you will often meet collocations like '*We have dealt with this topic*' [=We studied this problem].

### III. HOW DO WE LEARN VOCABULARY?

The process of vocabulary acquisition is a slow and gradual one. An item can be regarded as fully acquired when the learner has mastered both the form (phonological structure, stress pattern, syntactic properties, derivational potential) and the meaning of the given item (reference, sense and collocational relations; cf. Corder 1973:222). This level of word knowledge is not always attained even in our native language, and very often we only have partial knowledge of a considerable

number of words. This fact, however, does not prevent us from using those words in **specific** contexts (Urdang 1979:50).

The most important first step in the gradual process of acquiring foreign language vocabulary is to learn the most important formal properties of the new word and to associate this form with **something**. This something is usually a visual image or **some** other word that the learner already **knows**. The latter, i.e. verbal associations can be made either on the basis of sound or meaning. With respect to meaning, various sense relations can be exploited, either with words of the foreign or of the native language (cf Erdmenger 1985:162).

Associations build up over time. It is important that the learner should invest mental effort in learning the meaning of a new word. Active involvement in the construction of meaning helps to **generate** cognitive depth and aids retention. Looked at from this point of view, offering a NL equivalent to the learner is not very effective; however, as a first step in the process of acquisition, it might be helpful.

#### IV. CAN WE TEACH VOCABULARY?

In recent years there has **been** renewed interest in vocabulary research, yet there is still a lot of uncertainty about **teaching** vocabulary. The reason for this uncertainty is not only the anti-teaching **principles** of Krashen and **some** other applied linguists and methodologists, but also the fact that the communicative approach, which has prevailed in most countries in recent years, is focused on the **message** rather than the **code**, so teachers **have** come to be rather uneasy about **any** activity that is directed at learning the **code** (Cowie 1992:11). The learner is expected to learn word meanings from context, preferably incidentally. **Lexical** guessing and extensive reading are encouraged as conducive to good reading strategies and vocabulary acquisition.

Guessing on the basis of context and learning words incidentally, however, **have** their own problems. We cannot be **sure** that the learner will **have** guessed correctly. We cannot be **sure** that the words **he/she** has acquired by extensive reading will be available for productive use. It has **also been** shown that the chance of incidentally learning an infrequent item by extensive reading is very low indeed if the learner is reading for information. In English, pronunciation and stress may be mislearnt in this way.

Consequently, **learning words and word meaning from context and by extensive reading must be supplemented by activities aimed at the code**. Channell

(1988:94) claims that vocabulary work **does** not necessarily **have** to be integrated with general classroom communication; it can be **a separate learning activity**. The learning of words in the **native** language is a more conscious process than that of **learning** grammar, and it is not always contextualized. Thus, the choice of lexical items remains a more conscious process than the use of grammar knowledge in both L1 and L2 communication

## V. TECHNIQUES

A number of techniques and activities are available for vocabulary work, and most of these techniques can be used for teaching abstract vocabulary, too. It should be noted, however, that different vocabulary **areas** may require different techniques, and the techniques most commonly used might not be suitable for **all** vocabulary **areas**. In general I **have** found that there are very few exercises - either in general coursebooks or LSP textbooks - where the main emphasis is specifically on abstract subtechnical vocabulary. Thus, for **instance**, the semantic field technique coupled with componential analysis (Rudzka et al. 1981) works very well with concrete verbs (e.g. the verbs meaning *reduce in particle size* shown in Channell, 1988), but is less adaptable to the teaching of abstract verbs **like** *adapt*.

Exercises in synonymy are often **helpful** (*adjust - change, attain - achieve, adopt - accept*), but using synonyms to define the meaning of and practise abstract vocabulary **have** their inherent dangers. One of the dangers of relying on synonymy is that the synonym **will** be remembered rather than the targeted word. I observed this effect **in** the course of a note-taking practice with college students. When I had played a recorded **lecture** to them and asked them to give synonyms for **some** of the abstract vocabulary items in the **lecture**, they summarised the **lecture** from their notes using the more concrete and more frequent **colloquial** synonyms that I gave them during the **listening** phase to explain the meaning of the targeted items.

As I noted above, the most **important** sense relation for abstract vocabulary is probably the **collocational relation**. It stands to reason that in designing vocabulary exercises specifically for teaching abstract vocabulary, it is this relation that could help us most and should be maximally exploited. **While** it is difficult to form a visual **image** of the meaning of *attain*, and to store it in semantic memory, it seems possible to remember it from verbal associations such as *attain a goal*, or *attain a level*, and store it in verbal memory.

Interesting activities with collocations are now provided in many vocabulary books (e.g. Ellis and Redman, 1992), yet it is safe to say that collocations with abstract subtechnical vocabulary do not receive **sufficient** emphasis in teaching **ESP/EAP**. One reason is that in studying **ESP/EAP** texts technical terminology tends to occupy the attention of teacher and learner **alike**. Indeed, the text can often be understood on the basis of technical terminology alone. **Another** reason is that habitual collocations do not as a **rule** present comprehension problems: it is **only** when it comes to producing them in the foreign language that problems appear. Surprisingly, even advanced students fail to **recognize** habitual collocations, and **awareness-raising** is certainly needed in this area.

The claim that vocabulary work can, and perhaps should be a **separate** activity **does** not mean that it should always or overwhelmingly be concerned with isolated items. In most cases it is convenient to use a text as the **starting point**. Listening to recorded **lectures** may **take** care of the problem of pronunciation: by presenting the spoken before the written form it helps the learner to avoid pronunciation problems in long, leamed words. Recorded **lectures** can be used for collocational practice, too: students can be asked to recall the verbs collocated with the nouns or the nouns collocated with **the** verbs. Prediction exercises (predicting what verbs or adjectives will be collocated with a given **noun** in a text whose title, author and **source** they know), a standard procedure in general text-centred exercises, is **also** recommended. Exercises in synonymy (e.g. rewrite exercises), for reasons stated above, are best used in the colloquial to formal direction, not the other way round. Comparison of texts in different registers on the same topic may **also** be useful, again with the proviso that it **does** not reinforce **the** students' tendency to use colloquial language where formal language is more appropriate. **Organising** vocabulary along the lines of Rudzka et al. is helpful, wherever viable; it may not work very **well** with abstract vocabulary. **Examples** for **some** of the exercises referred to above are provided **in** the Appendix.

Extensive reading should of course be exploited, but the attention of learners should be directed towards **certain** linguistic points, especially collocations with abstract vocabulary. Follow-up work on vocabulary (e.g. pronunciation and stress) should be encouraged.

## VI. TEACHING AND TESTING

A frequent criticism of vocabulary teaching has **been** that in most cases it is not **teaching** but **testing**. This author **does** not agree with that **objection**. It makes perfectly good sense to practise vocabulary by testing what is known, or can be supposed to be known. **Also**, most language testing materials are very well suited to language teaching **purposes**. A good example of a vocabulary test which seems to be quite **suitable** for practising vocabulary, especially abstract vocabulary is the test developed by Read (1993). This test is aimed at measuring not **only** how many words, but **also** how many **meaning** relations among words the student knows (measuring vocabulary depth as against vocabulary breadth). The **stimulus** word is accompanied by 8 other words, 4 of which can in **some** way be related to the prompt, while the other 4 **have** nothing to do with it. The **technique** is very well suited to testing collocations with abstract words. **Here** is an example:

*attain**level**girl**certificate**goal**goalpost**attend**lesson**reach*

Three of the above items (*level*, *certificate* and *goal*) are collocationally related to *attain*, while one (*reach*) is a synonym. Discussing the acceptability of improbable collocations may **provide** opportunities for practising speaking skills: finding a context for an **unusual** collocation and **explaining** what it could mean in that context can **provide** opportunities for inventive students. **Some** students of mine **have** tried to argue the case for *attaining a goalpost* or a *girl*.

## VII. THE NATIVE LANGUAGE EQUIVALENT

Most teachers **feel** rather **guilty** about using the native language equivalents in teaching vocabulary. Yet we know that many students use the bilingual dictionary and learn vocabulary using bilingual word lists. Should such practices be tolerated, exploited or encouraged?

With general, concrete vocabulary items the L1 equivalent might **serve** as one kind of association, and there is no reason why it should not be allowed, even though it is of limited **usefulness**. **Later** on the learner may be weaned from the L1 equivalent and expected to **establish** a direct link between the L2 item and its visual

representation, or come to understand the meaning of the L2 word in terms of its L2 meaning relations. With abstract vocabulary, the use of or transition to other (e.g. visual) associations is difficult, if not **impossible**, sense relations are less clearly articulated, and polysemy is usual; under such conditions the use of L1 equivalents is bound to **have** adverse effects, that is, the association between the L1 and L2 term will **become** permanent. To avoid this, the collocational approach is again recommended.

There is one way, however, in which L1 equivalents might be **useful** in teaching abstract vocabulary, and this is in teaching students to **recognize collocations**. Such teaching may consist of the following (an **example** for this exercise is provided in the Appendix).

- a. Read the following text and underline **all** habitual collocations.
- b. Recall the L2 collocations on the basis of **L1** collocations.

At first, most students will probably fail to **identify all** the collocations in the text: they will fail to notice that sequences like *adopt a decision* are not free word combinations. However, when they are **called on** to produce, the difficulty of **recall** or the unacceptability of a literal translation may help to sensitize them to the collocation as a **unit**.

## VIII. CONCLUSION

Subtechnical vocabulary has **been** a centre of interest in LSP teaching in recent years. However, little attention has **been** devoted to differences within subtechnical vocabulary. The present author is convinced that abstract subtechnical vocabulary items present **the** learner with a more difficult **learning** task **than** concrete subtechnical vocabulary and should therefore receive special attention.

A number of exercises based on the collocational relation are available for this purpose and new types of exercises may be designed along the lines indicated in this paper. The exercises described **here** are **all** aimed at **sensitizing the learner** to collocations, to pay conscious attention to the **code**. To **state** the message of the present paper in one sentence: if you want to focus on a specific **feature** of the language you teach, design exercises specifically aimed at teaching those features.

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## APPENDIX

### 1. Prediction exercise

You are going to listen to this passage on human behaviour. Predict the verbs you expect with the following nouns: *difficulty*, *situation*, *adjustment*

### 2. Recollection exercise

Listen to this passage on human behaviour.

*[...] A difficulty which one person overcomes may defeat another person who may then either give up hope or become angry and try to change the situation by force. In this lecture I am going to talk about what happens when different personalities meet new situations.*

*Whenever a personality meets a new situation, the personality tries to reach an adjustment between itself and the situation. For example, you come into your office and find it too hot for you, so you open a window. The situation is the hotness of the room and the adjustment is the opening of the window. If there is no window to open the personality has to make a different adjustment in the situation, or it has to make an adjustment to itself, by learning to put up with the heat ...*

Can you remember which verbs were collocated with the word *situation*? (*change, meet, make an adjustment in*) and *adjustment* (*reach, make*)?

2a. Listen to this passage on human behaviour and write down the verbs and adjectives collocated with the nouns *situation* and *adjustment*.

### 3. Summarisation exercise

Summarise the passage on human behaviour using these collocations: *overcome a difficulty*, *a difficulty defeats a person*, *change the situation by force*, *meet new situations*, *reach an adjustment*, *make a different adjustment in the situation*, *make an adjustment to itself*

#### 4. Collocation recognition exercise

Read this text and underline habitual word combinations (collocations).

##### *Glyphosate residues in **barley***

*The herbicide glyphosate has **been** shown to give excellent control of scutch and other perennial weeds when applied about two weeks before harvest in weed-infested cereal crops. Little information is available on residues resulting from different rates of application of the herbicide so near to harvest. Work was therefore undertaken to determine residue levels in samples of grain from treated **barley** crops and thereby establish the minimum safety interval between application and harvest.*

*The samples were collected at 2-3 day **intervals** from August 18 to September 19, 1980. They included treatments ranging from half to twice the recommended rate of application of glyphosate with and without the addition of 2.24 kg/ha ammonium sulphate. The samples had a moisture content of less than 30%.*

*Although a large number of **analyses remain** to be carried out, the following conclusions can be drawn. In general, residue levels increased with rate of application and were highest for 8 litre/ha and lowest for 2 litre/ha. There was no **significant decrease** in residue levels between the fourth and ninth days **after** spraying. Ammonium sulphate had no observable **effect** on residue levels. The residue levels for the recommended rate of application (4 litres/ha) were all below the **maximum** residue limit of 8 mg/kg.*

4a. Read the passage and supply the English equivalents of the underlined Hungarian words.

*The herbicide glyphosate has **been** shown to kiválóan irtja a scutch and other perennial weeds when kiiuttatják about two weeks before harvest in weed-infested cereal crops. Little information is available on residues resulting from different rates of application of the herbicide so near to harvest. Work was therefore állítottunk be to determine residue levels in samples of grain from treated **barley** crops and thereby megállapítsuk the minimum safety interval between kezelés and harvest.*

*The samples were collected at 2-3 day intervals from August 18 to September 19, 1980. They included treatments ranging from half to twice the*

recommended rate of application of glyphosate with and without the addition of 2.24 kg/ha ammonium sulphate. The samples had a moisture content of less than 30%.

Although a large number of analyses kell még elvégezni, the following conclusions levonhatók. In general, residue levels increased with rate of application and were highest for 8 litre/ha and lowest for 2 litre/ha. There was no jelentős decrease in residue levels between the fourth and ninth days after spraying. Ammonium sulphate had no kimutatható hatás on residue levels. The residue levels for the recommended rate of application (4litres/ha) were all below the maximum residue limit of 8 mg/kg.

**4b.** Read the above text and decide which of these words and phrases actually occurred in the text: *demonstrate, give control of, little information is available, residues resulting from, rates of treatment, research was undertaken, establish residue levels, determine the minimum safety interval, collect samples, treatments ranging from ... to., suggested rate, perform analyses, draw conclusions, considerable decrease, observable effect*

### 5. Multiple matching exercise

Read the passage above and then match the items in column A with those in column B. (Preferably there should be a time lag of 20 minutes between reading and matching.)

A	B
control	undertake
information	level
application	carry out
work	ranging
residue	give
level	recommended
treatment	available
rate	significant
decrease	rate
analyses	determine