Noun and Verb Codes in Pedagogical Dictionaries of English: User-friendliness Revisited

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The aim of the present paper is to assess the user-friendliness of noun and verb coding systems in pedagogical dictionaries of English, measured by the frequency with which relevant information properly used in a productive task is located in codes. The influence of the following independent variables on the user-friendliness of codes is studied: the degree of syntactic congruity between Polish lexical items and English headwords, the form of codes, the grammatical category of headwords and the level of dictionary users' proficiency in English. To investigate the influence of the form of codes on their user-friendliness, codes in noun and verb entries were divided into mainstream-referring to formal categories, transparent and prevalent in pedagogical dictionaries, and alternative-which, used very sparingly in today's dictionaries, include reference to sentence functions-verbs-or many quite opaque symbols-nouns. Conclusions are drawn on the basis of an experiment in which almost 900 Polish subjects, advanced and intermediate in English, were involved in a translation task in which they had to use English noun and verb entries compiled for the purpose of the study. The results show that differences in grammar between Polish and English did not affect the consultation of either noun or verb codes. Strangely enough, alternative, and seemingly more demanding codes were strongly favored by the intermediate subjects, and-in the case of verbs-also the advanced ones. The part of speech played a very significant role at the higher level of proficiency, but was not important for the reference to codes by the less advanced. Finally, the higher level of proficiency in English made the subjects appreciate codes more fully, which may be seen as an argument for maintaining the over 70-year tradition of encoding syntactic information in pedagogical dictionaries of English.

1. Introduction

Encoding grammatical information has a long tradition in English pedagogical lexicography. Codes in the form of alphanumeric cross references from verb entries to the explanation of verb patterns in the outside matter were present already in GEW (1938, e.g. *See V.P.* 4; *hit1*). In time, the idea of making grammatical information in entries concise and accurate was applied to other parts of speech.[1] The early, very precise and economical, but completely opaque coding systems were in all likelihood useful to grammarians or linguists, but not learners, who had to either memorize them, or constantly refer to the outside matter (Aarts 1999: 16, Ellegård 1978: 236). Yet, even with the development of the user-centered approach, coding systems have not been discarded as obsolescent. On the contrary, transparent, but less accurate codes are still used today in the majority of MLDs.[2]

An analysis of verb and noun codes in the most recent editions of MLDs (CALD2, COBUILD5, LDOCE4, MEDAL2 and OALDCE7) suggests a dichotomous nature of the contemporary coding systems (Dziemianko: in press). Table 1 summarizes the findings.[3]

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[1] LDOCE1 was the first English monolingual learners' dictionary (MLD) to use codes also for nouns, adjectives and adverbs.

[2] The shift towards transparency at the expense of accuracy should by no means be seen as a shortcoming of the coding systems, since it is in the best interests of learners (Rundell 1998: 330).

[3] The analysis is based on transitive verbs as well as collective and reclassifiable nouns. A reclassifiable uncountable noun can be turned into a countable one with a semantic shift so as to denote quality or quantity partition (Quirk et al. 1985: 248, 298). Collective nouns, when in the singular, allow both

VERB CODES		
categories referred to	formal	formal-functional (*obj*)
verb symbols	V	T, I
used in	OALDCE7, COBUILD5	CALD2
e.g. *want*	[VN to-inf] *OALDCE7*	T [+ obj + *to* infinitive]
e.g. *name*	[V n n] *COBUILD5*	T [+ two objects]
NOUN CODES		
categories referred to	formal	formal
features	a few simple codes, transparent	many complex codes (separate codes for noun subclasses), more opaque
used in	OALDCE7, CALD2, LDOCE4, MEDAL2	COBUILD5
e.g. *cake*	[C/U] *MEDAL2*	[N-VAR]
e.g. *audience*	[C+sing./pl. v.] *OALDCE7*	[N-COUNT-COLL]
	"mainstream"	"alternative"

Table 1. Types of noun and verb coding systems in the most recent editions of MLDs

Clearly, the systems fall into two categories. On the one hand, there are formal verb codes and transparent noun codes, which prevail today in English pedagogical dictionaries, and, on the other, formal-functional verb codes and more opaque noun codes, which, present only in two dictionaries, cannot be said to be typical of MLDs. In the research reported below, the former codes are referred to as *mainstream* ones, and the letter are called *alternative*.

The present study aims to assess the user-friendliness of the two coding systems. User-friendliness it seen as the frequency with which codes are consulted, provided that they are properly used. Thus, before user-friendliness can be measured, relevant codes have to be identified, and the information they give must yield correct answers. Then, the frequency with which the relevant and useful syntactic information is located in codes may be seen as reflecting their user-friendliness (cf. Dziemianko 2006).

Unfortunately, research on the user-friendliness of verb codes is scarce, and noun codes—virtually nonexistent. Dziemianko (2006: 182) found that, "the external position of verb codes [i.e. the extra column] as well as contextual [i.e. full-sentence] definitions adversely affected the consultation of encoded syntactic information. Conversely, functional codes [i.e. including reference to syntactic functions] and the higher degree of proficiency in the language were beneficial in this respect."[4] The most closely related research concerns only the use and/or the usefulness of sources of syntactic information on verbs, not their user-friendliness (Bogaards & Van der Kloot 2001, 2002).

Thus, it seems necessary to extend the field of interest to nouns, search for the influence of other variables on the user-friendliness of encoded syntactic information as well as reconsider the unexpected findings. Below, the following factors are paid attention to: syntactic congruity

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singular and plural concord (Quirk et al. 1985: 316). In the case of transitive verbs, LDOCE4 and MEDAL2 do not use codes to indicate verb patterns, which is why they are not taken into account in the presentation of verb codes in Table 1.

[4] The conclusion concerning the role of the form of codes was very surprising and confounded the author's predictions.

between Polish and English lexical items (PL factor), the form of codes (mainstream vs. alternative), the part of speech (N vs. V) and the level of proficiency in English (interm. vs. advanced). The following hypotheses are tested:

1. similarity or difference in syntactic behavior between Polish and English lexical items is not important for the user-friendliness of codes,

2. alternative codes are as user-friendly as mainstream ones,

3. word class does not affect the user-friendliness of codes,

4. proficiency development stimulates the consultation of codes.

2. Method

2.1. *Materials*

To achieve the aim of the study, a test was devised. It consisted of 12 Polish sentences accompanied by their partial English translations. To fill the gaps in the translations, subjects had to use specific English words in correct structures. For each such word, a dictionary entry was given. The English target items corresponded to Polish words underlined in the sentences.

Two basic versions of the test were prepared: one with 12 nouns as the target items and the other with 12 verbs. For the noun test, 6 English uncountable nouns which can be reclassified as countable ones and 6 collective nouns were selected. In the verb test, all verbs were transitive, but 6 of them required complementation by an -*ing* clause, and the other 6 – by a full infinitive. In each of the 4 groups of 6 English items, 3 items behaved syntactically like the underlined Polish words (PL+ items), while the other 3 had different grammatical properties (PL- items).

The lexical items used in the study were selected very carefully. Attention was paid to Polish words whose English equivalents, taken from NKFD, seemed difficult for students of English. The grammatical properties of the items were checked in ISJP and the most recent MLDs. To prevent subjects from relying on their knowledge in the test, the English equivalents were replaced by other rare English lexical items found in HDDW.[5] Yet, semantic and grammatical information on the equivalents, not the substitutes, was given in the entries compiled for the study on the basis of the MLDs. Each entry offered two sources of syntactic information: examples and codes. There was always only one useful example and one useful code in an entry.[6] The English sentences which served as partial translations, and originally contained the English equivalents, came form corpora of English and the Internet. They were adapted to the experimental conditions and translated into Polish.

Two versions of noun and verb tests differing only in the form of codes in entries (mainstream / alternative) are analyzed below. The codes were explained at the end of the tests. The design is presented in Table 2. The Appendix shows an entry in VCA and the task for a PL+ verb.

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[5] The assignment of the substitutes was random, and so was their order in the test. The following trios were created (Polish word> Engl. equivalent> Engl. substitute): N: ciężar> hardship> chinch, ekipa> team> nautch, możnowładztwo > nobility> hachure, niesprawiedliwość> injustice> darnel, obsada> cast> brogan, okleina > veneer > turpeth, osad> sediment> mackle, pleśń> mould> gyle, szefostwo> management> fanion, zaprzęg> team> postil, zgraja> crew> chevet, żywica> resin> jactancy; V: nakazać> instruct> expiscate, przewidywać> envisage> brail, przypuszczać> presume> roup, przyznać> admit> aurify, uniemożliwić> preclude> purfle, uznać> pronounce> transude, wnieść> petition > osculate, wymagać> involve> loricate, zakazać> prohibit> swage, zalecić> recommend> vellicate, zamierzać> intend> jess, zaoszczędzić> save> yaffle.

[6] Definitions were formed so that the syntactic information needed in the test could not be extracted from them.

POS	12 Nouns				12 Verbs			
Codes	Alternative		Mainstream		Alternative		Mainstream	
PL factor	6PL−	6PL+	6PL−	6PL+	6PL−	6PL+	6PL−	6PL+
Test/dictionary symbol	NCA		NCM		VCA		VCM	

Table 2. Test/dictionary versions

2.2. *Subjects and procedures*

893 (603) native speakers of Polish took part in the study.[7] 507 (338) of them were advanced students of English (henceforth AS) at Poznan University in all years of study. The other 386 (265) subjects were mainly intermediate students (henceforth IS) attending (junior) high schools across the country. Each subject dealt with only one test in regular class time (45 min). The subjects were asked to complete the translation of Polish sentences into English using the English words for which dictionary entries were supplied and underline in the entries the piece(s) of grammatical information which they found useful.

3. Results

Only the cases where relevant codes were underlined and yielded correct answers are analyzed below. Table 3 and Figure 1 present the pertinent data. In the table, percentages are accompanied by lower (L) and upper (U) limits of 95% confidence intervals (p<.05).

Items		12				6PL−				6PL+			
Test		NCA	NCM	VCA	VCM	NCA	NCM	VCA	VCM	NCA	NCM	VCA	VCM
AS	L	39,7	52,2	59,8	34,6	33,2	47,0	58,4	33,4	40,7	52,8	58,4	33,3
	%	44,2	56,4	63,1	37,8	40,9	53,1	63,1	37,9	47,1	59,3	63,1	37,7
	U	48,8	60,6	66,3	41,1	48,9	59,5	67,6	42,7	53,6	65,1	67,6	42,4
IS	L	27,3	16,7	36,5	14,1	29,9	13,8	32,1	14,1	22,2	15,0	36,1	11,8
	%	34,3	23,2	41,7	18,1	40,8	23,3	39,9	20,3	30,5	23,2	43,0	16,6
	U	41,9	31,1	47,1	22,8	52,6	36,1	48,1	28,2	39,9	33,4	50,1	22,7

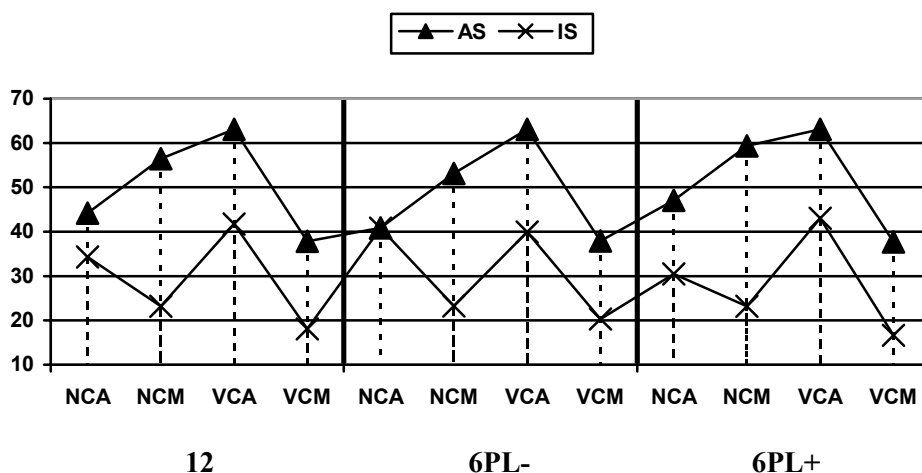Table 3. Reference to codes by the AS and the IS (12, 6PL− and 6PL+ items)

Figure 1. Reference to codes by the AS and the IS (12, 6PL− and 6PL+ items)

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[7] The digits without brackets refer to the total number of subjects in the study, in which also codeless noun and verb tests, not discussed below, were used. Those in brackets show how many students took the 4 tests where entries contained codes.

3.1. *PL factor*

In each dictionary and at both proficiency levels, reference to codes was comparable for PL+ and PL− items. This follows from the confidence intervals computed for 6PL− and 6PL+ items in a dictionary, which, if compared across the levels of the PL factor in either group, always largely overlap. Yet, the PL factor may have affected the role of the other variables and is still paid attention to in what follows.

3.2. *Form of codes*

To verify hypotheses 2, 3 and 4, Table 4 summarizes the results of the Z test.[8]

Var	Items	P1	P2	AS: Z Test	S	IS: Z Test	S	Prof.level	P1: AS	P2: IS	Z Test	S
FoC	12	NCA	NCM	−4,236	+	2,281	−	12	NCA	NCA	2,443	−
		VCA	VCM	10,662	−	6,644	−		NCM	NCM	7,434	−
	6PL−	NCA	NCM	−2,889	+	2,148	−		VCA	VCA	6,952	−
		VCA	VCM	7,408	−	3,509	−		VCM	VCM	6,399	−
	6PL+	NCA	NCM	−3,091	+	1,211		6PL−	NCA	NCA	0,021	
		VCA	VCM	7,668	−	5,722	−		NCM	NCM	4,221	−
POS	12	NCA	VCA	−7,055	+	−1,732			VCA	VCA	4,951	−
		NCM	VCM	7,217	−	1,313			VCM	VCM	3,687	−
	6PL-	NCA	VCA	−5,700	+	0,134		6PL+	NCA	NCA	3,173	−
		NCM	VCM	4,069	−	0,472			NCM	NCM	6,252	−
	6PL+	NCA	VCA	−4,328	+	−2,305	+		VCA	VCA	4,913	−
		NCM	VCM	6,057	−	1,337			VCM	VCM	5,229	−

Table 4. The effect of the form of codes (FoC) and the POS on reference to codes

Clearly, the AS' consulted alternative codes significantly more often than mainstream ones in verb entries, but preferred mainstream noun codes to alternative ones. The IS also underlined alternative codes significantly more often than mainstream ones in verb entries, and in the case of all 12 and 6PL- nouns (two-tailed, p<.05, Z_{crit}=|1,960|). With respect to PL+ nouns, the form of codes had no statistical significance for the IS.

3.3. *POS*

Verbs stimulated the AS' reference to alternative codes much more strongly than nouns, but nouns encouraged the subjects' consultation of mainstream codes much more than verbs. The part of speech did not play an important role in the IS' reference to codes. Only in the case of PL+ items were alterative codes used more often for verbs than nouns (two-tailed, p<.05, Z_{crit}=|1,960|).

3.4. *Proficiency level*

In general, the AS consulted both alternative and mainstream codes significantly more often than the IS. The positive and very strong effect of the higher level of proficiency on reference to codes was not observed only in PL- noun entries with alternative codes, where the codes were used comparably often by the AS and the IS (one-tailed, p<.05, Z_{crit}=1,645).

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[8] Whenever the percentage designated in the table by *P2* is significantly larger than that represented by *P1*, a plus (+) is used in the column *S* for significance, otherwise – a minus (−).

4. Discussion and conclusions

As predicted in hypothesis 1, the frequency of reference to codes turned out to be independent of grammatical differences or similarities between Polish and English items. Thus, as far as grammar is concerned, there seems to be no need to reverse the trend towards internationalization in pedagogical lexicography, and MLDs should still aim to serve an international target rather than be tailored to the needs of users in a given country (cf. Piotrowski's (1994: 137) suggestion to the contrary). Secondly, contrary to the prediction in hypothesis 2, greater user-friendliness of alternative codes than mainstream ones in verb entries, and even in many noun entries in the case of the IS, suggests that alternative codes, although seemingly more complicated and demanding of dictionary users, should by no means be discarded (cf. Dziemianko 2006 for similar findings). Third, hypothesis 3 about no influence of the part of speech on reference to codes was in general confirmed in the less advanced group, but it cannot be accepted at the more advanced level, where the grammatical category of headwords proved to exert opposite effects on the consultation of alternative and mainstream codes. Finally, the study supported hypothesis 4, as codes were more fully appreciated by the advanced subjects. Therefore, it seems that 70 years after the publication of GEW, they should remain part of the microstructure in a pedagogical dictionary (cf. Bogaards and Van der Kloot (2002) for a contrary claim, but Dziemianko (2006) for a similar conclusion).

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Appendix

3. <u>Zalecamy</u> wam kupić bilety z dużym wyprzedzeniem, aby uniknąć rozczarowania.

> vellicate /ˈvel ɪ keɪt/ *verb* suggest that a particular action should be done: [T + obj] *The report vallicated a 10% pay increase.* ◊ [T + obj + to infinitive] *We'd vellicate you to book your flight early.* ◊ [T + question word] *A package deal vellicated where work is for resale.*

We …………………..………………………… well in advance to avoid disappointment.