

A study of pupils' understanding of the morphological information in the Norwegian electronic dictionary *Bokmålsordboka* and *Nynorskordboka*¹

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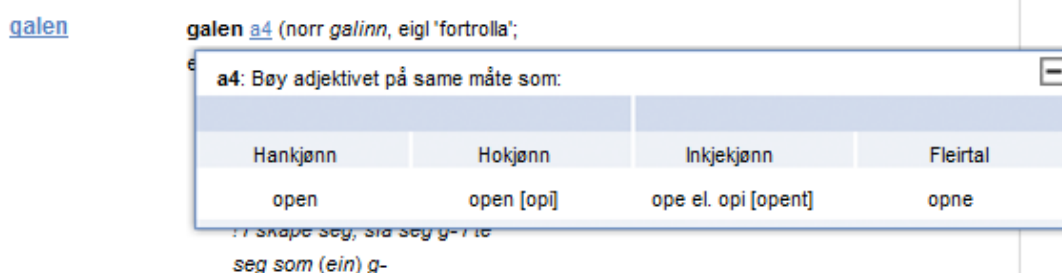
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Abstract

Do 15-and-16-year-old pupils understand the morphological information in the Norwegian electronic dictionary *Bokmålsordboka* and *Nynorskordboka*? That is the question addressed in this study. The informants were given grammatical exercises which they were supposed to answer by making use of the morphological information in the dictionary. The information consisted partly of codes and example words and partly of inflectional suffixes and full inflectional forms. According to the results, the former is easier to understand than the latter, but altogether, the information seems to be difficult to understand. This result suggests a need for changes in the way the morphological information is presented in the dictionary.

1. Introduction

Bokmålsordboka (BO) and *Nynorskordboka* (NO) (2010) is an electronic monolingual Norwegian dictionary that is based on material from two different paper dictionaries, *Bokmålsordboka* (Wangensteen 2005) and *Nynorskordboka* (Hovdenak 2006). In both the paper versions and the electronic version, the morphological information is given in a somewhat unusual way, namely by use of codes representing certain inflectional patterns. This is the case with regularly inflected words from the word classes of nouns, verbs and adjectives, as with the adjective *galen* 'crazy, wrong etc.' in figure 1, with the code *a4* and the example word *open* 'open'.



The screenshot shows the dictionary entry for 'galen'. It includes the code 'a4' and a table with the following data:

Hankjønn	Hokjønn	Innkjønn	Fleirtal
open	open [opi]	ope el. opi [opent]	opne

Figure 1. The morphological information about *galen* (*Bokmålsordboka* and *Nynorskordboka* 2010).

By clicking the code, a table appears, containing an example word which is inflected the same way as the entry word; here in genus and number with the endings -, -en, -en/-i, -e/-i/-ent and -ne. One therefore has to transfer the information about the example word to the entry word. For irregular words, inflectional suffixes and/or full forms are given, as in other dictionaries and word lists, for example like this by the feminine noun *tå* 'toe': -a [-i], *tær*, *tærne*. In this short article, I will present a study whose purpose was to find out whether pupils understand the morphological information in *BO* and *NO* online. Furthermore, I wished to identify potential differences between their understanding of the codes and example words and the more traditional information.

2. Previous studies

Knowledge of Norwegians' use of monolingual general dictionaries is limited, because most of the studies carried out centre around learners' dictionaries and have additionally been carried out outside Norway and the other Nordic countries. One of these studies is that by Anna Dziemianko (2011). She examined the user-friendliness of different types of syntactic noun and verb codes in English learners' dictionaries, and discovered that the *form* of the codes was significant in this respect. Alternative verb codes were more user-friendly than mainstream codes for all the informants, independent of level of knowledge, whereas the mainstream noun codes turned out to be the most user-friendly to the advanced students.

3. Research design and procedure

The informants in this quantitative study are forty-two 15-and-16-year-old pupils from the same school. They did not get any instruction in how to use the dictionary beforehand. Even so, they seemed to have a sound basis for understanding the information, because they all had been trained in using the word list *Nynorsk ordliste for alle* (Bjones and Dalene 1996), and because many of them had a grade in *nynorsk* which was above average. Because it is in working with *nynorsk* that the pupils are most accustomed to using dictionaries, the study is limited to the *nynorsk* part of the dictionary.

The pupils were given a booklet containing three questions about their previous knowledge, as well as eleven grammatical exercises. The exercises asked the pupils to inflect nouns and verbs by filling in forms in tables, and to supply the correct form of adjectives in sentences. The pupils were supposed to do this by making use of the morphological information in the dictionary. In order to try to avoid the pupils answering without using the information, for instance because they knew how to inflect the words beforehand, I mainly chose words which they likely did not know. The morphological information that was needed for every single exercise was given in the form of pictures, as in figure 1. The first five exercises contained information in the shape of codes and example words, and the remaining of inflectional suffixes and full forms.

4. Results

In total, the pupils answered 73 % of the exercises correctly, while the remaining were either answered wrongly or not answered; that is, 27 % of the answers were incorrect. A comparison of the answers to the exercises with and without a code and example word demonstrates that there are both more incorrect and more missing answers in the latter category; that is, those which provided traditional inflectional suffixes and full forms. In total, 32 % of the answers to these exercises were incorrect, as against 22 % of those to the exercises with code. Some of the adjective exercises proved to be particularly difficult, especially one with an error rate of 62 %.

5. Analysis

Generally, the study shows that there are surprisingly many incorrect and lacking answers to most of the exercises, considering the fact that the key was actually easily accessible. Analysis of the answers indicates that several mistakes are due to the pupils'

misunderstanding of the information given, for example how to add a suffix to a lemma. When example words are provided, it seems to be difficult to understand which part of the word is the stem, and thus which part should be transferred to the search word in order to inflect it correctly. Problems can also occur when only suffixes are given. What is included in the suffix varies, depending on what kind of irregularities occurs in the inflection of the word. This leads to problems identifying which part of the lemma to which the suffixes should be connected. For the irregular verb *slå* ‘hit, beat etc.’, every inflectional form is presented in its entirety. This seems to have a positive effect on the pupil’s answers, but the many correct answers here could also be due to the frequency of the verb and the fact that it can be inflected in the same way in *bokmål* and *nynorsk*. The reason why there are particularly many incorrect answers to some of the adjective exercises might be that this type of exercises is unfamiliar to the pupils. The problem could first and foremost be to find the correct gender and number.

Another explanation (than lack of understanding) is that the pupils may not have taken the exercises sufficiently seriously. They might simply have guessed the answer or known how to inflect the words beforehand, and thus not used the dictionary. The chance of this being the case is greater for the most common words. Obviously, this may also have led to correct answers. Furthermore, regrettable mistakes by the construction of the noun tables might have led to incorrect and lacking answers. Insufficient time is not a probable reason, since the pupils got the time they needed. Neither could it be claimed that it was difficult to find the information, because only the relevant parts of the dictionary entries were presented to the pupils.

6. Conclusion

In this article, I have presented a study of pupils’ understanding of the morphological information in *BO* and *NO*’s electronic version. The results demonstrate that none of the forty-two pupils answered all the exercises correctly, and 27 % of the answers were incorrect or lacking. Apparently, the morphological information consisting of a code and an example word is the easiest to understand. Because this mode of providing grammatical information is uncommon and thus unfamiliar to the pupils, this result was surprising. However, it becomes more understandable when we consider the cases in which such information is given, namely in regular words, which certainly are easier to inflect than irregular words. On the other hand, the results vary somewhat, for example in the sense that one regular verb is easy to inflect, while another is harder. This could be due to differences in frequency of occurrence. Such a lack of clear results makes it difficult to compare the pupils’ understanding of the codes with that of the traditional information. Nevertheless, there is no doubt that the pupils find it difficult to understand the morphological information, which suggests a need for changes in the way the information is formulated.

In a general dictionary such as *BO* and *NO*, which is used by people of different backgrounds, there are mainly three demands that should be made on the morphological information supplied. First of all, it should be as intuitive as possible; that is, not require much grammatical knowledge and reading of the introduction or instruction. Secondly, it should be easy to find; and thirdly, every word should have the same kind of information, as far as possible. Electronic dictionaries give us the opportunity to present the information in different ways, and even adapt the dictionary to every individual user or user situation, as suggested by lexicographers such as Atkins (2002: 15), Tarp (2009) and Verlinde et al. (2010). While the latter possibility requires much work, other smaller changes are more easily implemented, and may increase the understanding to an equal extent. If every inflectional form of every word is

presented fully and clearly, everything has been done to make it possible for the users to satisfy their need for information.

Note

¹ The article is based on my term paper in a lexicography course at the University of Oslo (2011).

References

A. Dictionaries and word lists

Bjones, J. and H. Dalene 1996. *Nynorsk ordliste for alle* (First edition.) Oslo: Universitetsforlaget.

Bokmålsordboka and Nynorskordboka 2010. Oslo: Universitetet i Oslo.
<http://www.nob-ordbok.uio.no>.

Hovdenak, M. et al. (eds.) 2006. *Nynorskordboka* (Fourth edition) Oslo: Samlaget.

Wangensteen, B. (ed.) 2005. *Bokmålsordboka* (Third edition) Oslo: Kunnskapsforlaget.

B. Other literature

Atkins, B.T.S. 2002. ‘Bilingual Dictionaries: Past, Present and Future.’ In M.-H. Corréard (ed.), *Lexicography and Natural Language Processing: a Festschrift in Honour of B.T.S. Atkins*. Huddersfield: Euralex, 1–29.

Dziemianko, A. 2011. ‘User-friendliness of Noun and Verb Coding Systems in Pedagogical Dictionaries of English: a Case of Polish Learners.’ *International Journal of Lexicography*, 24.1: 50–78.

Tarp, S. 2009. ‘Reflections on Data Access in Lexicographic Works.’ In S. Nielsen and S. Tarp (eds.), *Lexicography in the 21st Century. In Honour of Henning Bergenholtz*. Amsterdam: John Benjamins, 43–62.

Verlinde, S., P. Leroyer and J. Binon 2010. ‘Search and You Will Find.’ *International Journal of Lexicography* 23.1: 1–17.