EFL textbooks for young learners: a comparative analysis of vocabulary

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Abstract
This article reports the findings of a comparative analysis of two English teaching course book series which are widely used in school years 4–6 in Sweden: Good Stuff and New Champion. The analysis comprises comparisons of the vocabulary component in the teaching materials and examines the extent to which words – adjectives, nouns and verbs – recur in the books, whether there is a common core of words in the two series and, finally, whether vocabulary in the two teaching materials corresponds with accepted measures of English high-frequency words. The study shows that variation in vocabulary is considerable in individual books, within a series and between the two series; all textbooks contain a high proportion of one-time and low-frequency words. As a result, it is difficult to pin down a common core vocabulary. The study further shows that even though many words do correspond to general high-frequency words, as much as one-third are not found among the 2,000 most frequent English words.

Keywords: vocabulary learning, teaching materials, corpus linguistics, second language acquisition, word frequencies

Introduction
Vocabulary is an essential part of learning a new language. Successful communication is, of course, possible by the use of body language, pointing, drawing, and so on, but it becomes easier and more precise if we know what words to use. One important part of foreign language teaching in school is thus to help learners acquire as wide and varied a vocabulary as possible, and one common tool used to achieve this goal is the textbook. However, how much help and support for building up a vocabulary do learners of English actually get from a textbook? Analyses of the vocabulary component of textbooks are surprisingly scarce (but see Harwood 2014 for an overview) and studies have mainly focused on teaching materials aimed at adult learners. In the Swedish context, there has been only one comprehensive study of the vocabulary component in textbooks (Ljung 1990), which analysed teaching materials aimed at the high school level. There is thus a research gap to be filled and the focus of the present paper is to shed some light on the issue of vocabulary in textbooks in the Swedish primary school context.
Background

**Using textbooks in the language classroom**

In many foreign language classrooms around the world the textbook is the natural hub around which all teaching is centred (Ghosn 2003; Matsuoka and Hirsh 2010). In Sweden, 75% of English teachers in school years 5 and 9 use a textbook in every class and it is often the only teaching material used (Skolverket 2006). The situation is similar in Norway, with 70% of teachers in school years 1–7 using nothing but the textbook (Drew, Oostdam and van Toorenburg 2007). The corresponding figures in the Netherlands are lower: 46% of teachers in school years 5–6 use only the textbook, but almost all teachers use a textbook to some extent (ibid.; Edelenbos and Vinjé 2000). In most government-run schools in Hong Kong, textbooks are used as the basis for the teaching of English (Lee 2005). Furthermore, in many parts of the world, the textbook and English classes in school constitute the only linguistic input learners receive (Ghosn 2003). Consequently, it is of utmost importance that textbooks be of high quality and helpful in the acquisition of the new language.

One explanation for this reliance on the textbook is that many teachers – in particular, inexperienced teachers – see the textbook as a completely trustworthy authority (Abello-Contesse and López-Jiménez 2010; Chu Ying and Young 2007; Ghosn 2003). By using the textbook, teachers hope to cover all that is required in national curricula and syllabi (Skolverket 2006). Another explanation is that the textbook with its accompanying workbook and teacher’s guide is a timesaver for teachers, who are more often than not pressed for time. Teacher’s guides commonly contain suggestions for incorporating texts into class activities and what to include as homework, as well as different kinds of tests to administer to learners and extra material to give to learners who progress more quickly than others. To plan the teaching for a whole semester or maybe even for a whole academic year is relatively easy for teachers who strictly follow the structure and suggestions given in a complete set of teaching materials (ibid.). However, using these materials also means that decisions as to what should be taught in the classroom are handed over to those who produce the teaching materials, rather than being a professionally calculated decision made by the teacher with a particular set of learners in mind.

Even though (or maybe because) textbooks are widely used in language teaching around the world, they have met with considerable criticism. Substantial critique has been aimed at the language used in textbooks in general and that in dialogues in particular. Dialogues are commonly described as ‘artificial’ (Cameron 2001; Kirk and Carter 2010; Rebenius 2005; Tyler 2012), ‘overly correct’ (Wray 2000) and lacking adequate models for both spoken grammar and pragmatic language use (Gilmore 2007). The selection of vocabulary included in textbooks has also been criticised. One point of criticism has been that the vocabulary component varies considerably in different textbooks; textbook writers do not seem to have considered
a core vocabulary that should be included (Carter and McCarthy 1988; Gouverneur
2008; Koprowski 2005; Nation 2001; Rixon 1999). There is no established list of
core vocabulary for English, but West’s (1953) 2,000-word General service list of
English words (GSL) is commonly used as a suggestion for ‘must-know’ words.
Despite its age, comparisons with more recent frequency counts have shown that
most of the words included in the GSL are still valid (Read 2004). However, instead
of being based on the GSL or on any other frequency list, vocabulary included in
textbooks seems to be haphazard and rather dependent on the personal preferences
of the writer(s), as pointed out in more than one textbook analysis (Abello-Contesse
and López-Jíménez 2010; Meara and Suárez García 2010; Nation 1993; Rixon 1999).
Another point of criticism directed towards the vocabulary component in textbooks
is that recycling of words is insufficient (Cameron 2001; Matsuoka and Hirsh 2010;
Nation 1993). In their analysis of the treatment of phrasal verbs in EFL course
books, Alejo González, Piquer Píriz and Reveriego Sierra (2010) observed that most
phrasal verbs occur only once or twice in the books, a finding substantiated in a
study carried out by Boers, De Rycker and De Knop (2010). Similarly, Jiménez
Catalán and Ojeda Alba (2010) concluded that the recycling of connectors in
teaching materials was lacking, and Vellenga (2004) criticised the lack of appro-
priate pragmatic input in the eight textbooks analysed in her study.

An even more serious problem is the apparent lack of scientific grounding
evident in many teaching materials. The opinion has been voiced that, possibly,
“ELT course books contradict rather than reflect contemporary developments in
applied linguistics” (Matsuoka and Hirsh 2010, 59). One aspect of this is the linear
approach to language learning adopted in many textbooks (Islam 2003; Morgan and
Rinvolucrì 2004), that is, the view that features of language are learned one at a time
and that full mastery should be achieved before learning something new (Nunan
1998). However, this approach lacks support from research. On the contrary, studies
have demonstrated that language learning is non-linear (de Bot, Lowie and Verspoor
2007; Morgan and Rinvolucrì 2004) and that learners often give evidence of both
correct and incorrect forms in spontaneous production (Ellis 1985), thus reflecting
the ongoing development of their interlanguage. Furthermore, vocabulary in
textbooks frequently fails to adequately account for the formulaic nature of authentic
language, with glossaries commonly comprising decontextualized words (Siepmann
2008) rather than focussing on chunks and collocations.

These shortcomings are “a cause for concern” (Fox 1993, 314); Gilmore (2007)
emphasises the necessity of improved communication between researchers and
textbook writers, to which Harwood (2014) agrees, maintaining that “information
about research findings on second language acquisition, motivation, and other aspects
of language learning could be usefully added to the [teacher’s] guides to empower
teachers” (9). The results of a survey among textbook writers and publishers in
Sweden (Skolverket 2006) indicate that the content of teaching materials is chosen
with the national curriculum and language syllabi in mind. A prerequisite for publication, however, is that teaching materials appeal to teachers and learners – in other words, that they sell. To improve the vocabulary component in textbooks, more corpus data on word frequencies could be used (Burton 2012; Koprowski 2005). Frequency counts are not difficult to access today and “[w]ith the aid of word lists, materials writers could not only ensure the most useful words occur in the ELT course books or readers they write but also control for their frequency and dispersion throughout the text to promote acquisition of these words by the L2 learner” (Matsuoka 2012, 170). Introducing learners to a vocabulary of long-term validity with a wide usage range should be a priority in all textbooks. Schmitt (2000) suggests that the 2,000–3,000 most frequent words in English would be a realistic goal for learners.

How to learn new words

Learning new words involves the acquisition of vocabulary breadth as well as depth. The former is important to provide learners with a variety of alternative ways of expressing themselves, for example synonyms, and to develop knowledge of vocabulary within different domains. The latter is important to pave the way towards a more idiomatic use of language, for instance by using appropriate collocations and by establishing other relations between words, for example antonyms. Nation (2001, 27) divides word knowledge into three main parts: form (spoken, written and morphology), meaning (form and meaning, concept and referents, and associations) and use (grammatical functions, collocations, and constraints on use such as register and frequency). To have only partial knowledge of a word is not uncommon, as evidenced by the different levels of language users’ receptive and productive abilities. Melka (1997) referred to the distance between a language user’s receptive and productive vocabulary as “degrees of [word] knowledge” (88). Thus, a learner may recognise a word in context without being able to use it productively. Similarly, the oral production of a word in the correct context is possible without any knowledge of its written form.

To acquire breadth and depth as well as both receptive and productive knowledge of words and to firmly anchor them in long-term memory, vocabulary items need to be used and encountered in many different contexts. The storage of words can be described as a network (Aitchison 2012; Schoonen and Verhallen 2008), where relations between words will be more or less strong depending on learners’ previous experiences of and encounters with them:

The lexical elements in the mental lexicon consists [sic] of interrelated nodes in a network, which specify the meaning of an element. The denser the network around a word, the richer the set of connections around that word, the greater the number of words known, and the
deeper the knowledge of that word [...] a child who knows more words also tends to know more about each word; [...] Thus, word knowledge is a function of the frequencies of the word nodes in the network. (Vermeer 2001, 231)

Establishing relations between words also facilitates the acquisition of new vocabulary, as previously acquired words can function as ‘hooks’ onto which new items are attached (Verspoor and Lowie 2003; Xiaoyan and Wolf 2010). More elaborate ways of working with new vocabulary have also been found to be beneficial for acquisition (Boers, Demecleheer and Eyckmans 2004; Hunt and Beglar 2002): “The amount of mental work done by learners affects how well a new word is engraved in memory; the more learners have to think about a word and its meaning, the more likely they are to remember it” (Cameron 2001, 85). This idea is related to levels of processing (Craik and Lockhart 1972), a concept that entails the idea that deeper word processing will lead to words being stored in long-term memory and being more easily retrieved. To achieve deeper processing, words can, for example, be categorised according to different criteria or combined with other words to form collocations (Hunt and Beglar 2002). Deeper mental processing might, however, be less suitable for beginners: “If a generalization can be made, shallower activities may be more suitable for beginners, because they contain less material that may only distract a novice, whereas intermediate or advanced learners can benefit from the context usually included in deeper activities” (Schmitt 2000, 133; see also Barcroft 2002).

Opinions may be divided as regards levels of processing, but the important role played by frequency in vocabulary acquisition is not questioned (Ellis 2013; Nation 2008; Schmitt 2008; Webb 2007) but rather has been recognised as “a key determinant of acquisition” (Ellis 2002, 144). Both receptive and productive word knowledge benefit from frequent and repeated exposure to new words (Ellis 2002), but productive proficiency generally takes longer to develop (Webb 2007). Furthermore, as Zahar, Cobb and Spada (2001) show, frequent and repeated exposure to new vocabulary is even more important for beginners than it is for more advanced learners. Still, there is no consensus on how many times a new word needs to be encountered before it may eventually be acquired (productively or receptively). Estimates range from 5 (Cameron 2001) to 12 times (Coady 1997), but a figure that is mentioned more often than others is 10 times (Matsuoka 2012). Fewer encounters than that can be seen as a waste of the time and effort invested in trying to learn them. In the present study, the cut-off points for low and high frequency have been set to less than 5 and more than 12 tokens, respectively.

Not only should vocabulary be repeated often, but an opportunity to repeat new vocabulary should be provided soon after the first encounter: “It is easier to forget a word than remember it. Initial word knowledge is fragile and memories
of new words that are not met again soon, are lost” (Waring 2002, no page). Intervals between repetitions can then gradually be prolonged, for example, 1–3–8 (e.g. 1, 3 and 8 days after the first learning opportunity) rather than 5–5–5 (Landauer and Bjork 1978). Repetition should also include meeting new vocabulary in different contexts in order to facilitate network building and the establishment of relations between words (Rott 2005; Schmitt 2008).

**English teaching in the Swedish context**

The position of English as the most important foreign language to learn and know is unchallenged in Sweden. From a very early age, children are exposed to English through subtitled television and other media (Sundqvist 2009; Sylvén 2004). English is also one of the most important school subjects. All students in school years 6 and 9 (ages 12 and 15, respectively) go through a series of national tests assessing their levels of language proficiency, receptive as well as productive abilities, and a passing grade in English when leaving the 9-year-long compulsory school is necessary for entering high school.

In the Swedish national curriculum there is no set stage at which English begins, but it cannot be later than school year 4 (age 10). There is a great deal of variation nationwide, since local councils have the right to decide on this matter. Therefore, the start of English teaching varies, with some children starting as early as in school year 1 (age 7), but approximately half of Swedish children start studying English in school year 3 (age 9). No matter when the study of English starts, the guaranteed number of hours allocated to the subject in compulsory school remains the same: 480 hours in total (Skolverket 2011).

The most recent national curriculum, which came into force in 2011, is explicitly based on the *Common European Framework of Reference for Languages* (Council of Europe 2001; Skolverket 2012). The grading criteria in the language syllabi are now more aligned with the different proficiency levels laid out in the framework. The goals to reach after school years 4 and 6 are the basic user levels A1 and A2, respectively (Skolverket 2012).

Commercially produced teaching materials are very common in the language classroom in Sweden. In school year 5, for example, the textbook is used in every, or almost every, English class (Skolverket 2006). Until 1991, the quality of teaching materials was guaranteed by the work of an examining state commission (Långström 1997), but it is now up to individual teachers to evaluate the appropriateness and value of any teaching materials used. Since teachers seldom have the time and do not always have the competence needed to carry out this kind of evaluation (Council of Europe 2001), textbook analyses have much to contribute to the field of language learning and teaching.
The study
This study is a comparative analysis of vocabulary in two sets of teaching materials commonly used in Swedish primary schools. The specific research questions to be addressed were as follows:

1. Which words occur most frequently in the textbooks?
2. To what extent do words recur in individual textbooks?
3. To what extent do words recur over the complete series?
4. To what extent do the two sets of teaching materials share a common vocabulary?
5. To what extent does vocabulary in the two sets of teaching materials overlap with established measures of English high-frequency words?

The analysis is limited to adjectives, nouns and lexical verbs because they constitute the largest classes of content words (Börjars and Burridge 2001) and as such are very important in vocabulary acquisition. They also account for between 41 and 46% of the total number of words in the textbooks; because they constitute such a large part of the vocabulary component in the textbooks, they merit further analysis.

Method and material
The material for the present study comprises two sets of teaching materials commonly used in Sweden: Good Stuff (GS) and New Champion (NC). These widely used series are produced for use in school years 4–6 (pupils aged 10–12 years). The complete set of teaching materials is comprised of a textbook with an accompanying workbook, teacher's guide and CDs with text recordings and songs. The textbooks will henceforth be referred to as GS4, GS5, GSA, NC4, NC5 and NC6.

In order to answer the research questions, a corpus containing all the texts in the books was compiled for each set of teaching materials, with sub-corpora for individual books. The texts were scanned and saved as TXT files. To make possible searches of the corpora and comparisons between and within the two sets of teaching materials, the words in the texts were then tagged according to word class, number, tense, and so on, with the automatic part-of-speech tagger CLAWS, which follows the same principles used for the construction of the British National Corpus (BNC). To search the corpora, the concordance software tool MonoConc Pro was used. The sizes of the corpora in number of tokens (running words) and types (individual words) are presented in Table 1.

Most words in the textbooks were either in their base form or were regularly inflected, and the decision was made to carry out the analyses on the lemma level (i.e. cat–cats [or sing–sings] were not counted as two distinct words but were
considered as constituting a lemma and, consequently, one type). Because MonoConc Pro does not take lemma into consideration, the type figures in Table 1 were manually adjusted downwards. An additional adjustment was also made for the category of nouns. CLAWS tags names for days, months, holidays and countries as proper nouns, and as such they would not show in the results generated by MonoConc Pro for a search of nouns. However, because such words commonly feature in texts and glossaries in teaching materials aimed at younger learners, in this study they were treated as common nouns and added manually to the data analysed.

Results

Word frequencies

In this section, the results related to research questions 1 and 2 (RQ1 and RQ2) are presented, that is, what words are most frequent in the textbooks and to what extent words recur in individual textbooks. As mentioned previously, the cut-off points for low and high frequency were set to less than 5 and more than 12 tokens, respectively.

Adjectives

High-frequency adjectives in the textbooks mainly belong to a small collection of word types with a relatively wide range of usages: big, good, little and old.\(^4\)

The correspondence between books within the same series is rather high. The same high-frequency adjectives feature on all levels with only some new additions. This is especially the case for NC, with only six types having a frequency of more than 12 tokens. The GS books show somewhat more variation, with the number of types increasing in each book. In particular, GSA stands out with its much wider spread over different adjective types. In total, 17 types reached the cut-off point for high frequency within the GS series.

There are, thus, a number of adjectives that learners are exposed to quite frequently and, hence, should have a fair chance to acquire. However, this is not the whole truth, as becomes evident on closer analysis.
Table 2 shows that high-frequency adjectives only account for a very small proportion of adjective types, whereas low-frequency items, that is, words with a frequency of one to four occurrences, make up between 77 and 90% of all adjective types, with NC books showing the highest figures of low-frequency words. The high figures for one-time words are also worth noting, ranging from 43 to 58% of all adjective types. On average, every second adjective occurs only once in a book.

**Nouns**

The noun category displays much more variation than the adjectives as regards high-frequency items.

Again, GSA shows the largest variation, and in general the GS series varies more than NC. Some of the words that recur in all the books, regardless of series, are everyday, common words such as *dad, day, mum* and *time*, but other words stand out as being not as common in everyday speech: *cane toad, dragon, pirate, shop assistant* and *snake*.

The pattern of high numbers for low-frequency adjectives is repeated for the nouns.

As indicated in Table 3, the figures for low-frequency nouns resemble those for adjectives: between 78 and 89% of all noun types have occurrence rates of maximum four times. Again, the NC series displays the highest proportion of low-frequency items. Figures for one-time nouns are generally higher than the corresponding figures for adjectives.

Table 3. Noun type frequencies in percentage of the total number of noun types

|      | 1 time | 2–4 times | Sum 1–4 times | 5–12 times | >12 times |
|------|--------|-----------|---------------|------------|-----------|
| GS4  | 45.6   | 37.9      | 83.5          | 13.0       | 3.5       |
| GS5  | 49.1   | 34.1      | 83.2          | 13.7       | 3.1       |
| GSA  | 47.3   | 31.4      | 78.7          | 15.5       | 5.8       |
| NC4  | 51.0   | 38.1      | 89.1          | 9.8        | 1.1       |
| NC5  | 48.0   | 34.2      | 82.2          | 15.6       | 2.2       |
| NC6  | 51.6   | 35.7      | 87.3          | 10.7       | 2.0       |

GS, Good Stuff; NC, New Champion.
Verbs

The pattern of considerable variation displayed for the nouns continues for the verbs, but in general high-frequency verbs are common words that can be used in many different contexts (e.g. *know, like, want*) and, unlike nouns, there are really no examples of verbs that stand out as being of more peripheral usage.

Despite the variation, the correspondence between books, both within and between the two sets of teaching materials, is rather high: the same verbs tend to feature in all textbooks. For example, all but one high-frequency verb in NC books are found in at least one more book within or outside the series. Again, however, GS displays much more variation than NC and GSA has the highest number of exclusive verbs.

As shown in Table 4, verbs also follow the same pattern as adjectives and nouns, with many low-frequency items, even though the figures are somewhat lower as compared to the other two word classes.

Although the proportion of mid- and high-frequency verbs is higher than that of adjectives and nouns, low-frequency items still account for between 67 and 76% of verbs in the corpus, with one-time verbs making up between 38 and 46% of the total number of verb types.

To sum up this section, there are a number of words in both sets of teaching materials that learners are exposed to quite frequently. However, the majority of words in the individual books are not of frequent and repeated occurrence.

### Recycling of words and shared vocabulary

If words are not repeated in individual textbooks sufficiently often to promote acquisition, they might perhaps recur in later books in the same series. This is the focus of RQ3. As seen in Table 5, however, the proportion of words recurring in only one book is very high. The two sets of teaching materials do not differ in this respect: only one-fifth of adjectives, nouns and verbs recur throughout a whole series.

Another aspect to consider here, which is only disclosed by a closer analysis, is that many of the words that actually do occur in all three books within one set of teaching materials occur only once or are of low frequency in each book. Learners are thus very likely to perceive these words as new when they are again encountered in later books.

|          | 1 time | 2–4 times | Sum 1–4 times | 5–12 times | >12 times |
|----------|--------|-----------|---------------|------------|-----------|
| GS4      | 38.8   | 31.9      | 70.7          | 17.3       | 12.0      |
| GS5      | 37.7   | 29.4      | 67.1          | 19.9       | 13.0      |
| GSA      | 40.6   | 27.1      | 67.7          | 19.7       | 12.6      |
| NC4      | 36.4   | 33.3      | 69.7          | 22.0       | 8.3       |
| NC5      | 38.3   | 36.6      | 74.9          | 15.2       | 9.9       |
| NC6      | 45.9   | 30.4      | 76.3          | 15.2       | 8.5       |
RQ4 focusses on the extent to which GS and NC share a common vocabulary. A comparison of which adjectives, nouns and verbs are presented in both sets of teaching materials reveals that the overlap between GS and NC is fairly low. The proportion of common vocabulary ranges between 26 and 32% in GS and between 36 and 39% in NC. The lower proportions for GS are expected because of the higher number of different types in that teaching material (see Table 1). The variation is thus quite considerable not only within each set of teaching materials, but also between them.

RQ5 addresses to what extent vocabulary in the two sets of teaching materials overlaps with high-frequency words in general. To determine how well the three word classes analysed here correspond to the 2,000 words in the GSL, they were run through the RANGE software. The results are presented in Table 6.

As shown in Table 6, the proportions of word types found in the two sets of teaching materials corresponding to the second word band (i.e. the 1,000 second most frequent words according to the GSL) are relatively similar both for word classes and for teaching materials. As regards the first band (i.e. the 1,000 most frequent words according to the GSL), on the other hand, variation is considerable, with only 30% of GS nouns and as many as 53% of NC verbs corresponding with the GSL. The figures in Table 6 also reveal, however, that quite a large percentage of the words presented in the two sets of teaching materials are not found within the 2,000 most frequent words of general English. This is particularly the case for nouns and adjectives. On the whole, however, NC displays a closer affinity with the GSL than does GS.

**Discussion**

Which words are most frequent in the textbooks, then (RQ1)? The variation in vocabulary is considerable both within and between series. Many high-frequency adjectives and verbs are words with a wide range of usage, words that will also be

| Table 5. Percentage of recycled word types within each set of teaching materials |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | Occurrence in one book | Occurrence in two books | Occurrence in three books |
| Adjectives                      | GS                | NC               | GS                | NC               | GS                | NC               |
|                                 | 62.2              | 62.0             | 19.5              | 16.7             | 18.3              | 21.3             |
| Nouns                           | 64.9              | 70.6             | 19.8              | 19.3             | 15.3              | 10.1             |
| Verbs                           | 51.7              | 49.2             | 20.2              | 25.0             | 28.0              | 25.8             |
| Total mean                      | 59.6              | 60.6             | 19.8              | 20.3             | 20.5              | 19.1             |

| Table 6. Percentage of word types within and outside the two 1,000-word bands in the GSL |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | First 1,000 | Second 1,000 | Not in list |
| Adjectives                      | GS          | NC            | GS        | NC            | GS        | NC            |
|                                 | 36.03       | 41.03         | 25.64     | 27.35         | 38.33     | 31.62         |
| Nouns                           | 29.37       | 35.59         | 22.70     | 23.49         | 47.93     | 40.92         |
| Verbs                           | 45.84       | 53.63         | 28.40     | 26.32         | 25.76     | 20.05         |

GSL, General Service List of English Words
useful to learners in the long run (e.g. good, big, go, get, say), but the group of high-frequency nouns comprises many words that stand out as being less useful in different contexts or for all stages of life (e.g. witch, dragon, pirate). This mirrors, of course, the content of the different texts and it is likely that children of the intended age will appreciate texts about dragons and pirates. Pirate is actually found among the top 200 keywords in the Oxford Children’s Corpus, a corpus of texts written for children aged 5–14 years (Wild, Kilgarriff and Tugwell 2013), an indication that the word appropriately figures in textbooks intended for young learners. The question is whether it would be possible to find texts that appealed to younger learners while also containing vocabulary that would be useful in wider contexts and at later stages of life. To give some perspective to the figures of high-frequency nouns (see Appendix), a quick search of the 100-million-word BNC reveals, for example, a total of 860 tokens for dragon. If the same proportions were applied, the number of tokens in GSA should be 15 instead of 42. Furthermore, a search in the BNC for cane toad yielded a total of 4 tokens, to be compared with 19 in GSA.

Cameron (2001) emphasises the importance of providing young learners with “a useful base for more grown-up purposes” (31), but it is doubtful whether the two sets of teaching materials analysed here really live up to that. Learners should, of course, acquire as wide a repertoire of words as possible, which they are unlikely to do unless they encounter many different words. However, without sufficient repetition in different contexts, words are not likely to be retained (Schmitt 2008). How well do the two sets of teaching materials fare in this respect? That is, to what extent do words recur in individual textbooks (RQ2)? High-frequency words, that is, words having a frequency of at least 13 tokens, account for only a small part of the vocabulary presented in the books: on average, only between 4 and 12% of words in the GS series are of high frequency, whereas the figures in NC range from 2 to 9%. In this respect at least, GS can be said to provide learners with a more varied input of highly frequent items, an indication that using GS might be more beneficial for the development of vocabulary breadth. On the other hand, low frequency adjectives, that is, adjectives recurring one to four times in the books, account for between 77 and 90% of all adjective types in the two sets of teaching materials, respectively; the corresponding figures for nouns are between 79 and 89% and for verbs between 67 and 76%. Overall, NC features more low-frequency words than GS. Paribakht and Wesche (1997) estimate the chance of acquiring words after one encounter as no more than 5–10%. On a similar, but even bleaker, note, Waring and Takaki (2003) report that “[i]f the word was met fewer than 5 times, the chance [that its meaning would be remembered] is next to zero” (150). Seen from this perspective, the conclusion can be drawn that there are far too many low-frequency words in both sets of teaching materials. Texts do need ‘filler’ words to be interesting and appealing to readers and, undoubtedly, learners meet new vocabulary not only when reading the texts, but also in other activities performed in the classroom and in exercises in

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the workbook. It must be questioned, however, whether this is enough to help remedy the lack of recycling caused by the high proportion of low-frequency words.

Not only is the rate of recycling of words within individual books low, but also within series, an issue addressed in RQ3. No more than approximately 20% of words occur in all three books in each series, but for nouns the rate of recycling is as low as 15% in GS and 10% in NC. In other words, it is difficult to detect a core vocabulary within the series. Because only one-third of words on average are shared between the two series, it is as difficult to identify a core vocabulary common to GS and NC, and more so for nouns than for adjectives or verbs. The answer to RQ4 is thus that the two sets of teaching materials have only a limited vocabulary in common. This situation is not unique to these two sets of teaching materials, as shown by other studies (Carter and McCarthy 1988; Gouverneur 2008; Koprowski 2005; Nation 2001; Rixon 1999), but it is nonetheless unfortunate. There is no list of English core vocabulary acknowledged by everyone engaged in the field of vocabulary acquisition, but a possible point of departure could be the GSL. Despite its age and even though some words that are very frequent in language today are lacking (e.g. laptop, mobile), the list is still a very good starting point (Read 2004). Furthermore, the GSL was originally created to be used with young learners (Nation and Chung 2009).

RQ5 focussed on the extent to which vocabulary in the textbooks analysed overlaps with general high-frequency words. Even though the majority of words in the two sets of teaching materials correspond to those in the GSL, on average, approximately one-third falls outside of its range. NC is somewhat better than GS in this respect, having a smaller proportion of words not matching those covered in the GSL. The situation is particularly serious for nouns, however, with 48% of GS nouns and 41% of NC nouns not found in the GSL. Certainly, the importance of having texts that appeal to the age group aimed for must be acknowledged, but at the same time learners, including young learners, need to acquire a vocabulary that is useful in the long run and not so much related to their age. Later books in the two series, that is, the textbooks aimed at school years 7–9, might, of course, contain more general high-frequency words, but that study has not yet been initiated. Yet, even when teaching materials such as those analysed here are used, they are not always the only linguistic input learners receive, especially in the Swedish context, where learners are exposed to English on a daily basis and from a very early age. It should thus be acknowledged that learners also build up their vocabularies outside of school when they participate in different kinds of spare-time activities in English (Sundqvist 2009) – for example, gaming, blogging, chatting, writing fan fiction and consuming popular culture in the form of music, films and TV series.

Concluding words

The conclusion that can be drawn from this study is that textbook writers do not seem to consider word frequency in their choice of what words to include in texts, even
though frequency lists are readily available for use and despite all the research results indicating the importance of knowing the most frequent words in a language. Teaching materials are commercial artefacts and publishers are certainly interested in selling their products. A deeper interview study with textbook writers might shed more light on whether this fact has a constraining effect on their work and also on the choices they make as regards the vocabulary component. Because of the high number of low-frequency words within both sets of teaching materials analysed, much of the effort spent on learning vocabulary other than the small proportion of high-frequency items will very likely be wasted, since learners will not engage with words sufficiently often for acquisition to take place. However, even with inadequate teaching materials learners might acquire a substantial vocabulary – if they have dedicated teachers who recycle the textbook vocabulary more often than the textbook teacher’s guide suggests, who incorporate vocabulary outside the textbook into their teaching, and who really focus on providing their students with the conditions needed for successful vocabulary acquisition. Acquiring a sizeable vocabulary that can be used for both receptive and productive purposes over the course of the learners’ lifetime takes a lot of time and effort. Using findings from second language acquisition research and corpus linguistics as a basis for the development of teaching materials could be one step towards enabling learners to accomplish that task.

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Notes

1 Both content (lexical) words and function (grammatical) words are included in this number. The present paper deals with three classes of content words: adjectives, nouns and verbs. Data on other word classes are not yet fully analysed.

2 The book used in school year 6 is called Good Stuff A and is followed by Good Stuff B–D in school years 7–9.

3 CLAWS is available from http://ucrel.lancs.ac.uk/claws/

4 Words from all three word classes with frequencies of at least 13 tokens are presented in the Appendix.

5 The RANGE software is available from http://www.victoria.ac.nz/lals/about/staff/paul-nation. Among other things, RANGE enables the researcher to see how many words in a text are among the high frequency words of English and how many fall outside of this range.
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## Appendix

Adjectives with a frequency of at least 13 tokens. The exact number of tokens is given in brackets. Words in the same cell have the same number of tokens.

| GS4 | GS5 | GSA | NC4 | NC5 | NC6 |
|-----|-----|-----|-----|-----|-----|
| Good (32) | Big (37) | Good (65) | Good (29) | Good (29) | Old (39) |
| Little, red (28) | Good (32) | Big (58) | Nice (16) | Old (24) | Good (27) |
| Big (20) | Little (28) | Old (28) | Big (14) | Big (23) | Big (16) |
| White (13) | Old (26) | Small (25) | Right (13) | Nice (14) | Nice (15) |
| Happy, new (23) | Bad (22) | | | Long (13) | |
| Hot (18) | Long (19) | | | | |
| Great (13) | Little, strange (18) | | | | |
| Black (15) | | | | | |
| Red (14) | | | | | |
| Dead, great, nice (13) | | | | | |

Nouns with a frequency of at least 13 tokens. The exact number of tokens is given in brackets. Words in the same cell have the same number of tokens.

| GS4 | GS5 | GSA | NC4 | NC5 | NC6 |
|-----|-----|-----|-----|-----|-----|
| Dad (48) | Mum/mom (44) | People (63) | Mum (41) | Dad (59) | Chapter (33) |
| Mum/mom (38) | People (43) | Man (57) | Dad (33) | Chapter (31) | Woman (31) |
| Day (36) | Day (40) | Dragon (42) | Chapter (31) | Mum (25) | Day, time (29) |
| dog (29) | Dad (38) | Day (41) | Morning (18) | Time (23) | Text (27) |
| Friend (25) | Man (32) | Food, snake (36) | People (20) | People (26) | |
| Bed, name (23) | Friend (30) | Friend (35) | Day (18) | Girl (21) | |
| Time (21) | Time, wolf (26) | Mum (33) | Girl (17) | Hand, thing (19) | |
| Doctor (20) | Honey (24) | Time (31) | Room (15) | Dad (16) | |
| Monkey (19) | Film (19) | Witch (29) | Dolphin, year (14) | Year (15) | |
| Summer, week (18) | Australia, hand, zoo (17) | Dad, water, year (28) | Man (13) | Door, name, shop assistant (13) | |
| School (16) | Life, school (15) | Animal (26) | | | |
| Fish (15) | | Pirate, story (25) | | | |
| | | Woman (24) | | | |
| | | Assistant (23) | | | |
| | | Boy, home (22) | | | |
| | | Human (21) | | | |
| | | Clothes, thing (20) | | | |
| | | Cane toad, child, school, world (19) | | | |
Verbs with a frequency of at least 13 tokens. The exact number of tokens is given in brackets. Words in the same cell have the same number of tokens.

| GS4 | GS5 | GSA | NC4 | NC5 | NC6 |
|-----|-----|-----|-----|-----|-----|
| Be (438) | Be (609) | Be (811) | Be (337) | Be (438) | Be (427) |
| Like (83) | Say (70) | Have (108) | Get (41) | Look (59) | Get (52) |
| Go (68) | Get (64) | Go, say (70) | See (35) | See (45) | Go (50) |
| WANT (55) | Go (63) | Look (68) | Go (24) | Get (41) | See (41) |
| come (54) | See (60) | Know (58) | Have (22) | Go, say (36) | Have (40) |
| Get (52) | Look (55) | Want (56) | Know, look (21) | Take (35) | Know (38) |
| Say (47) | Know, have (50) | Come, think (55) | Like (20) | Want (34) | Say (37) |
| Love (41) | Do (47) | See (50) | Think (14) | Come, have (30) | Do (30) |
| Have (40) | Want (46) | Take (48) | Think (28) | Want (28) |
| Know, see (27) | Take (41) | Eat, get (45) | Make (21) | Look, take (24) |
| Live (26) | Come (34) | Do (40) | Do, know (20) | Call, think (20) |
| Jump (24) | Think, walk (30) | Make (39) | Let (18) | Make, mean (18) |
| Call, let (22) | Learn (28) | Live (37) | Start (17) | Start (17) |
| Look, play (21) | Play (26) | Like (35) | Find (16) | Feel, like (16) |
| Wear (20) | Eat, run (24) | Call, put (34) | Call, walk (15) | Ask, give (15) |
| Need (18) | Make (23) | Tell (33) | Stop, watch (14) | Come, try (14) |
| Think (16) | Like (22) | Find (28) | Hear (13) | Play (13) |
| Make, take (15) | Hear, live, try (20) | Walk (27) | |
| Eat (14) | Stop (19) | Run (26) | |
| Ask, fall, find, sit (18) | Try (23) | |
| Start (17) | Fly, give (22) | |
| Love, watch (16) | Hear (21) | |
| Call (15) | Kill (19) | |
|       | GS5       | GSA                        | NC4       | NC5       | NC6       |
|-------|-----------|----------------------------|-----------|-----------|-----------|
| GS4   | Put (14)  | Help, love start (18)      |           |           |           |
|       | Hold, need, shout, stand, talk (13) | Fight, jump, talk, work (17) |           |           |           |
|       | Believe, sit (16) | Bring (15)                |           |           |           |
|       | Climb, mean, throw (14) | Become, die, happen, leave, move (13) |           |           |           |