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研究課題名(和文) A coverage-based approach to diagnosing English vocabulary targets for Japanese university students

研究課題名(英文) A coverage-based approach to diagnosing English vocabulary targets for Japanese university students

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研究成果の概要(和文)：本研究では、まずNew JACET8000の英単語リストを20のレベルに分けました。大学生が簡単なレベル1～10の単語の知識を持っているので、次にレベル11～20の単語を対象としたテストを作成しました。各レベルから単語を抽出してテスト項目を作成し、528人の学習者にテストを実施し、データを分析しましてCoverage-Based Levels Vocabulary Test「CBLVT」を作成しました。最後に、<vocabularychecker.net>サイトを開発しました。CBLVTを受けて、自分がどのレベルの語彙を学ぶべきかを発見したり、そのレベルの単語を探したりすることができます。

研究成果の学術的意義や社会的意義

Utilizing a carefully constructed vocabulary test, this research gives teachers and learners a new way of deciding which words should be studied and a means of identifying those words in texts.

研究成果の概要(英文)：This project began by dividing the New JACET8000 wordlist into 20 levels, with each level designed to be equally important. We then investigated university students' knowledge of the easiest levels and found that it is reasonable to assume that university students have knowledge of the first 10 levels. Next, we created a test for the words in Levels 11-20. We sampled words from each level, wrote test items, trialled the items with 528 English learners, and analysed the trial data. We then revised some of the test items, conducted further trialling, and produced a final version of the test, the Coverage-Based Levels Vocabulary Test (CBLVT). Finally, we developed a website <vocabularychecker.net> at which users can take the CBLVT, discover which vocabulary level they should study, and analyse texts in order to find words at their level.

研究分野：applied linguistics

キーワード：vocabulary text coverage vocabulary testing vocabulary targets new JACET8000 wordlist wordlist banding word frequency text profiling

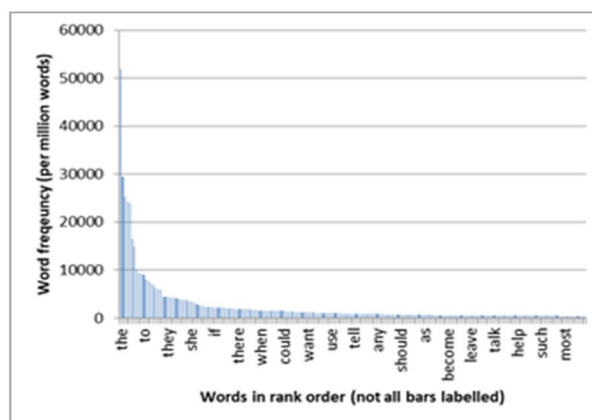
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1. 研究開始当初の背景

Vocabulary knowledge is of fundamental and empirically established importance to language learning. To support vocabulary acquisition, we must know which words learners have acquired and which words learners can benefit from learning next. Word frequency lists are of great help in this regard: while not the only factor, frequency is a strong predictor of vocabulary knowledge; and frequency shows how useful words are, signaling which words should be studied next.

The New JACET8000 wordlist (JACET Basic Words Revision Committee, 2016), a list developed specifically for Japanese university learners of English, is therefore a valuable aid for language instructors in Japan. However, it is important to establish how this resource can best be used. Word lists are often divided into bands of 1,000 items (e.g. in the development of vocabulary tests and in analyses seeking to determine the suitability of texts for learners). However, this convention does not take account of the frequency distribution of words in English (Figure 1). This distribution is extreme and consequently, bands of a 1,000 words have very different levels of utility. The first band (i.e. words 1-1000) accounts for 80% of the combined frequency of the first 10,000 words, the second band accounts for 8%, the third band 4%, on to the tenth band which accounts for just 0.5%.

Figure 1: Frequency distribution of top 200 English words.



An alternative way of dividing up a word list for teaching purposes is to create bands based on coverage, whereby each band covers the same proportion of the combined frequency of all the words in the list (e.g. if there were ten bands, each band would account for 10% of the combined frequency of the words). This approach creates bands that vary greatly in size, with just a few words in the highest bands and many, many words in lower bands.

Such an approach might have two advantages. First, it may create bands that better match learners' capacity for learning. That is, learners at lower proficiency levels would study bands containing fewer words, which may provide more manageable and achievable targets. Second, the approach may give us a different perspective on learners' vocabulary knowledge, allowing us to diagnose which words a group of learners should study. Tests based on 1,000-word bands typically show a gradual, step-by-step decline in knowledge across the bands. This makes it hard to come to any conclusion about which band learners need to study. Tests based on coverage-based bands, however, may be more helpful, showing high levels of knowledge across the first few bands followed by a sharp drop in knowledge, thereby giving a clearer indication of appropriate study targets.

2 . 研究の目的

This project set out to explore the possibilities of coverage-based vocabulary banding and had three aims: (1) To determine how best to divide the New JACET8000 list into bands to facilitate university English instruction; (2) To develop a test to allow teachers to identify which vocabulary band should be targeted for a particular group of learners; (3) To provide an online tool for analysing texts to allow users to identify suitable texts for study and target words within those texts.

3 . 研究の方法

Phase 1 of the project focused on establishing what the end-product, the Coverage-Based Levels Vocabulary Test (CBLVT) should cover. To this end, after dividing the New JACET8000 wordlist into 20 coverage-based bands, we carried out an empirical study of university students' knowledge of the first 10 bands (those containing the most frequent words). This involved creating a test item for each word in these bands, collecting data from 102 learners and quantitative analysis of the data.

In Phase 2, we developed the CBVLT. We carried out sampling of items from each band, developed 320 test items (i.e. writing item stems and carefully selecting distractors) and trialled the items with 528 English learners. We then used Rasch analysis to establish the test's reliability, dimensionality and difficulty level. Items featuring loanwords were carefully scrutinized and a distractor analysis was conducted. In order to help establish test validity, we carried out a further study in which learners completed test items and were then interviewed to verify their knowledge of the words. Items identified as problematic through the above analyses were then re-written and trialled once more with 89 learners. For the final version of the CBLVT, we selected 15 items for each level that performed well in the trial and that reflect the overall distribution of items.

In Phase 3, we developed a website <vocalevelchecker.net> for learners and teachers which contains the CBLVT and a text profiling tool. Website users can take the CBLVT, see their score at each level, and discover the vocabulary level that should be focused on. They can then use the profiling tool to analyse texts which allows users to judge the suitability of a text and to find words in a text at the appropriate vocabulary level.

4 . 研究成果

In Phase 1, there were two principal outcomes: (1) We established the coverage-based bands, dividing the New JACET8000 wordlist into 20 bands each of equal importance in terms of coverage; and (2) We established empirically that university learners have good knowledge of each and every word in Bands 1-10. These first 10 bands contain just 44 words, but each of these words (e.g. it, at, so) is extremely frequent and thus of great importance. While it might be assumed that such words are well known by university students, any gaps in knowledge of these words would likely cause considerable problems for learners. Thus, rather than relying on an assumption, we carried out an empirical investigation of university learners' knowledge of each of these words. For each word in these bands, we created a test item (or in some cases multiple items to test various word uses), collected data from 102 learners, and, through careful analysis of the data, determined that university

learners do indeed have good knowledge of these words. This outcome means the commonplace assumption that these words are known by learners is reasonable.

In Phase 2, the principal outcome was the development of our vocabulary test, the CBVLT (as described above). This test provides a means of measuring learners' knowledge of each coverage-based band (from Band 11 to 20), thereby allowing learners and teachers to see which bands should be targeted for learning.

Development of the CBVLT also had two subsidiary outcomes. First, as one part of test validation, we wished to compare responses to a more direct measure of learners' word knowledge. Oral interviews are perhaps the most reliable method for this, but written translation tasks are also used, partially because of their convenience. Since the relative accuracy of oral interviews and written translation tasks was unclear, we conducted a study to compare them. Of particular interest was the case of English loanwords because, in a written translation task, when learners give responses in katakana, it is impossible to distinguish actual knowledge from simple phonological matching of unknown words. Having compared written translations and oral interviews for 32 target words with 21 learners, the outcome was that written translations are highly similar to oral interviews.

The second subsidiary outcome was a consequence of our study comparing oral interviews and written translation tasks in which we also found that overall, use of katakana in translations is likely to reflect actual knowledge. Based on this, we collected data to compare two CBLVT item types for target items that are loanwords in Japanese (e.g., captain). In one item type, the correct answer option was given in katakana (e.g., キャプテン), and in the other a synonym or word of Japanese etymological origin (e.g., 主将) was used. It was found that while for many words the latter item type was superior, for some particular words katakana answer options provide a better indication of learners' actual word knowledge. The outcome was therefore that when testing target items that are loanwords in Japanese, careful trialling of different types of answers options should be conducted.

In Phase 3, the principal outcome was the development of the website <vocablevelchecker.net>, which is now available to the public. Utilizing the research and outcomes established in Phases 1 and 2 of the project, the website was designed as a user-friendly tool enabling learners and teachers to take the CBLVT and make use of the coverage-based vocabulary bands to profile texts and identify words for study.

Ongoing work aims to build on the achievements of Phases 1-3 and includes:

- Studies of what constitutes mastery of a band and how to best determine which band a learner or group of learners should target.
- Utilization of the coverage-based bands to investigate language teaching textbooks, exploring the vocabulary demands of textbooks and how appropriate specific textbooks are for given groups of learners.
- Further dissemination and promotion of the <vocablevelchecker.net> website.

5. 主な発表論文等

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〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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