Studies in Second Language Acquisition (2021), 1–4
doi:10.1017/S027226312100067X

Critical Commentary

THOUGHTS ON WORD FAMILIES

Paul Nation

Victoria University of Wellington, New Zealand

WORD FAMILY LEVELS

The primary issue behind the word families debate is learner knowledge. Some learners do not yet have a good enough knowledge of the English morphological system. However, we need to acknowledge that learner knowledge develops and thus the definition of word family needs to change in relation to learner proficiency. This makes the making of word lists messy, but validity should take precedence over practicality.

One of the motivations behind the making of the Bauer and Nation (1993) levels was to take account of proficiency development through the use of a cumulative series of word family levels. The Bauer and Nation criteria were based on the morphological factors of frequency, regularity, productivity, and predictability rather than on empirical measures of learner knowledge. Measures of learner knowledge can provide very useful data that can be considered when making decisions about size of word families, but the primary consideration when making word lists to guide learning and proficiency testing should be the usefulness of the items to learn. One of the other important contributions of the Bauer and Nation article was to raise awareness of the need to make explicit what is included in a family to ensure consistency between different words in a list and different studies of vocabulary knowledge. These two very important considerations provided a basis for the principled development of the substantial BNC/COCA lists.

Although research has shown that the Bauer and Nation levels only partly agree with learner knowledge data, there are nonetheless strong arguments for using the levels to guide teaching and learning. These arguments are based on the importance of the criteria used for making the levels, particularly frequency and regularity for receptive knowledge, and additionally productivity and predictability for productive knowledge. (Note that frequency refers to the number of different words an affix occurs in, not the overall token frequency of the affix.) Teaching and learning should give the best return for teaching and learning effort. Information on learner knowledge of affixes (sometimes misleadingly called *word difficulty*) can help to target focuses among the items suggested by the Bauer

Correspondence concerning this article should be addressed to Paul Nation, 35 Warwick Street, Wilton, Wellington 6012, New Zealand. E-mail: paul.nation@vuw.ac.nz.

© The Author(s), 2021. Published by Cambridge University Press. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re- use, distribution and reproduction, provided the original article is properly cited.

and Nation criteria. Frequency and learner knowledge are complementary criteria not alternatives when choosing what to learn and teach.

In the literature of the word family size debate, lemmas are seen as an alternative to word families. This is a convenient shorthand, but lemmas are word families, and using the shorthand terms can hide the fact that decisions on word families are not an either/or choice (lemma vs. word family) but are decisions on what word family level is most suited to a particular research or teaching goal. It is also important to note that the term lemma has several definitions and those using the term need to clearly indicate which definition they are using. Geoffrey Pinchbeck's creation of the term *flemma* for lemmas that include different parts of speech has helped make this distinction more convenient (see Nation, 2016, p. 26).

WORD FAMILIES AND PROFICIENCY DEVELOPMENT

Brown and colleagues (2020) show that there is plenty of evidence that many learners have problems in dealing with word families in that they do not recognize that a complex word form is made of a known stem and affix (or affixes) and that the meaning of the complex form relates to the meaning of its parts. As they note, the research shows that knowledge of affixes develops as a part of language proficiency development, and that some knowledge of affixes exists but is often patchy. In their review, lower proficiency learners on average scored around 55% on the affixes tested, with scores around 70% or higher for more proficient learners. The most important message from this and related research from a pedagogical perspective is that there is plenty of justification for a strong and deliberate focus on word parts and morphological awareness. Because affixes differ in frequency, regularity, productivity, and predictability, there is value in a principled set of levels of affixes so that attention is given to affixes following an order that will give the best return for learning effort. A few affixes account for a large proportion of affix use (Laufer & Cobb, 2020).

Unfortunately, the issue of word families is moving toward an all-or-nothing argument with little or no credit given for the knowledge that learners have and little consideration that knowledge of word building develops as proficiency develops. A small part of the problem is terminology with lemmas and flemmas not being called word families. The middle ground needs to be that we need to match word family level with the purpose for which we are using word families and with the proficiency of the learners. If we are examining text coverage for high-proficiency learners, Level 6 of Bauer and Nation is likely to be suitable. Using Level 6 word families to measure coverage of a text to be used with low-proficiency learners is clearly unsuitable because it will underestimate the difficulty posed by complex words where the learners do not see a connection between the complex word and its related forms. However, using Level 6 families can be helpful as a way of seeing how much lower proficiency learners need to learn because it gives credit for future proficiency development.

If we are measuring the vocabulary size of native-speakers of English, Level 6 of Bauer and Nation may not be inclusive enough (Brysbaert et al., 2016). If we are deciding what derivational affixes to teach to low-frequency learners, or what affixes to allow in the early levels of a graded reading scheme, Bauer and Nation Level 3 is a very useful starting point.

While Brown and colleagues (2020) provide compelling data, they overstate their conclusions ("beyond the vast majority of L2 learners" [p. 4], "even their abstract knowledge of affixes is far from complete" [p. 5]) and this is not helped by defining word families as Level 6. This polarizes the debate rather than clarifies it. I think it is safe to make the following conclusions on the currently available research and theory.

Pedagogy

Learners of English need to develop knowledge of word families, and the language-focused learning strand of a course should give attention to this.

Low-proficiency learners usually have some word part knowledge, but they would benefit in many ways from a systematic program in developing knowledge of word parts and their application. The Bauer and Nation levels provide a useful guide for such a program.

Word part knowledge develops as proficiency develops, and research and pedagogy need to take account of this.

Text Coverage

When checking texts for word coverage for low-proficiency learners, a low level of word family, such as Level 2 or 3 should be used so that the difficulty posed by complex words is not overlooked. When checking texts for word coverage for high-proficiency learners, we should use a level of word family that takes account of their knowledge of word parts (Level 4 or higher).

Testing

When designing vocabulary tests for low-proficiency learners, we need to use a word family level for the very high-frequency words that is likely to match their knowledge of word parts so that they get credit for the additional learning needed for some complex words. Using too large a word family will result in underestimating their vocabulary size.

Similarly, when designing tests for high-proficiency learners, we need to use a word family size that is likely to match their knowledge of word parts so that we do not inflate the measure of their vocabulary size.

Setting Goals

When looking at the size of the vocabulary learning task facing learners of English, we need to take account of proficiency development during that task, namely, that their knowledge of word parts will develop.

Reporting Research

One size fits all at any part of the scale of word family size is problematical. So, when using measures where learner proficiency and the size of word family used does not fit, we need to be cautious and explicit in interpreting the results.

The distinction that Webb makes between pedagogy and research is a useful one. In pedagogy, we need to ensure that our learners' morphological knowledge develops as quickly as possible because good morphological knowledge greatly increases the opportunities for vocabulary learning. In research, we need to suit the level of word family to the knowledge of our learners if that suits the purpose of the research, and we need to

acknowledge that the level of word family will need to change as proficiency develops to take account of that development.

REFERENCES

Bauer, L., & Nation, I. S. P. (1993). Word families. *International Journal of Lexicography*, *6*, 253–279.

Brown, D., Stoeckel, T., McLean, S., & Stewart, J. (2020). The most appropriate lexical unit for L2 vocabulary research and pedagogy: A brief review of the evidence. *Applied Linguistics*. Advance online publication. https://doi.org/10.1093/applin/amaa061.

Brysbaert, M., Stevens, M., Mandera, P., & Keuleers, E. (2016). How many words do we know? Practical estimates of vocabulary size dependent on word definition, the degree of language input and the participant's age. *Frontiers in Psychology*, *7*, 1116.

Laufer, B., & Cobb, T. (2020). How much knowledge of derived words is needed for reading? *Applied Linguistics*, *41*, 971–998.

Nation, I. S. P. (2016). *Making and using word lists for language learning and testing*. John Benjamins.