Introduction

There is now a broad consensus in applied linguistics that second or foreign language learners (henceforth L2 learners) stand to gain a lot from acquiring considerable numbers of multiword items (henceforth MWIs). MWI is used in this chapter as an umbrella term for a wide range of expressions comprising more than a single word, which have in the literature received various labels, including “lexical phrase”, “multiword unit”, “phrasal expression”, “chunk”, “prefab”, “phraseme”, “collocation”, “idiom”, “lexical bundle”, and “formulaic sequence”. Research has demonstrated that familiarity with MWIs aids receptive as well as productive fluency (e.g., see Conklin, this volume). It aids receptive fluency because knowledge of MWIs makes discourse relatively predictable. For example, on hearing or reading last but not, a proficient language learner will be able to anticipate least. Similarly, reading a wordstring such as the difference was not statistically is likely to prime significant in a reader who is familiar with the genre of quantitative research reports. Knowledge of MWIs aids productive fluency because well-mastered MWIs can be retrieved from memory as prefabricated units rather than being assembled at the time of speaking. Such “holistic” retrieval of MWIs is particularly plausible in the case of fixed expressions that show no morphological or syntactic variability (e.g., on the other hand; happy birthday; no strings attached; at the end of the day; and so on).

Broad knowledge of MWIs is also indispensable for comprehension of reading and listening texts (Kremmel, Brunfaut, & Alderson, 2017; Yeldham, 2018), because the meaning of many MWIs (e.g., cut corners – “not following regulations to save money or effort”) transcends that of the individual words of which they are made up. Learners whose own language use exhibits good mastery of MWIs tend to be perceived as proficient language users as well (Bestgen, 2017; Crossley, Salsbury, & McNamara, 2015; Stengers, Boers, Housen, & Eyckmans, 2011).

Given that L2 learners stand to gain so much from learning MWIs, it is worth investigating the factors that are likely to facilitate or hinder this learning. For one thing, it may help to estimate whether particular MWIs stand a good chance of being acquired relatively fast and without much effort on the part of a language learner. For another, it may inform the nature
of instructional intervention where intervention is deemed necessary. A major challenge in discerning the factors that play a part in the acquisition of L2 MWIs, however, is that the class of MWIs is very large and made up of very diverse (types of) items, and so the factors affecting their learning are bound to differ from one (type of) MWI to the next. Another challenge is to take account of individual learner profiles, because an MWI that poses few problems to one learner (for example because it has a close equivalent in that learner’s L1) may be quite elusive to another.

The multifarious nature of MWIs is also reflected in the different procedures that researchers apply to identify MWIs in language (see Wood, this volume). Such identification procedures have in recent times become increasingly informed by corpus data. One procedure is to screen a corpus for highly frequent uninterrupted wordstrings (or so-called n-grams). Wordstrings that meet a certain frequency criterion stipulated by researchers are customarily labeled “lexical bundles” (e.g., Biber & Barbieri, 2007; Biber, Conrad, & Cortes, 2004). For example, strings such as for instance, as if, as soon as, and one of the will qualify as lexical bundles depending on the frequency threshold stipulated. Another corpus-based procedure is to look for strong word partnerships, i.e., frequent co-occurrences of (content) words regardless of whether they are immediately adjacent to one another. The above-chance co-occurrence of words is commonly called “collocation” (Sinclair, 1991). The strength of the word partnership is often determined on the basis of a “mutual information score” (MI score), which reflects the extent to which two words seek each other’s company rather than the company of other words. A combination such as tell + joke is a case in point, because it is tell rather than another linguistic action verb that collocates with joke. The fact that native speakers are unlikely to make lexical substitutions in such expressions (e.g., say a joke) illustrates that frequency distributions in a representative corpus can serve as a reliable proxy of how strongly particular words are associated with one another in language users’ mental lexicons (Hoey, 2005; Taylor, 2012). It is worth noting that word partnerships of low frequency words (e.g., wreak havoc) can also yield very high MI scores. Endeavors to create lists of MWIs to be prioritized in learning will therefore typically consider frequency thresholds as well as collocational strength among the criteria for inclusion (e.g., Martinez & Schmitt, 2012; Simpson-Vlach & Ellis, 2010).

Yet another identification procedure, in use already long before the advent of corpus linguistics, is to evaluate whether the meaning of a given wordstring can or cannot be inferred straightforwardly by adding up the meanings of the constituent words. If not, then the wordstring is considered to be “non-compositional”, i.e., its meaning transcends that of the individual words combined. The traditional label for MWIs identified on such semantic grounds is “idiom”. The class of idioms itself is also diverse, however, because some (e.g., pull strings) may be interpretable thanks to cultural background knowledge (e.g., familiarity with the image of a puppeteer manipulating the strings attached to his puppets), while others (e.g., by and large) are truly opaque (Grant & Bauer, 2004). Figurative phrasal and prepositional verbs (e.g., turn up) can also be considered idioms by virtue of their non-compositionality (e.g., Kövecses & Szabó, 1996), but also within this class of MWIs we find gradation in transparency. The universally shared association of “more” with “up” (Kövecses, 2005) may help a learner appreciate the use of up in turn up (the sound), but its use in an expression such as (we’ll have to) put up with (her) is likely to elude this kind of reasoned interpretation.

Apart from their semantic non-compositionality, idioms are of course also characterized by a high degree of fixedness at the level of form. For example, one does not normally substitute “pull” in pull strings by another verb or use “string” as a singular noun – if one wishes to preserve the figurative meaning of the idiom. Neither does by and large lend
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itself to adaptations such as “by and quite large”. Given their fixed lexical makeup, it is not surprising that many word combinations which were identified as idioms in the pre-corpus-linguistics era also meet the corpus-based criterion of above-chance co-occurrence (and thus reflect the phenomenon of “collocation”; e.g., Macis & Schmitt, 2017). What has become increasingly apparent thanks to corpus linguistics, though, is that phraseology (or what Sinclair [1991] called the “Idiom Principle” as opposed to the “Open Choice Principle”) encompasses much more than “idioms” in the traditional sense.

At the same time, the observation that MWIs vary in their semantic compositionality is undeniably relevant to the subject of the present chapter, because compositionality is associated with transparency of meaning, and transparency of meaning is naturally one of the factors likely to influence the learnability of a given MWI. Other likely factors include the frequency of occurrence of the MWI in the samples of the target language that a learner is exposed to (e.g., play a part will be encountered more often than rule the roost), because this can be expected to affect the pace at which a given word association is established in the learner’s mental lexicon. Whether learning an MWI is “just” a matter of remembering a combination of familiar words (e.g., do + damage) or remembering a combination involving new words (e.g., seek + solace) is another likely factor, because recalling new word forms is challenging in its own right. Several more characteristics of MWIs likely to influence learning will be discussed further below.

Apart from characteristics of the MWIs proper, the chances of MWI learning will inevitably also depend on the circumstances and the activities through which a learner engages with the target language. To give just one example for now, more encounters with a given MWI in samples of the target language may be needed in conditions where the learner is not focusing specifically on the MWI than in conditions where the MWI is made the object of intentional study (provided the study procedure is an efficient one). In what follows, we will therefore distinguish different opportunities or scenarios for MWI learning, moving from the uptake of MWIs from content-focused reading to deliberate MWI-focused learning.

Critical Issues and Topics

Estimating the Chances of MWI Acquisition From Texts, Without Instructional Intervention

When language learning happens as a by-product of message-focused activities, this is usually called “incidental” learning, as opposed to deliberate efforts to commit language items or features to memory (see Webb, this volume, and Lindstromberg, this volume, for more in-depth discussions of incidental and intentional vocabulary learning, respectively). Many studies of incidental learning have concerned the incremental acquisition of words from reading, but only relatively recently have MWIs attracted interest in this strand of research as well. Reminiscent of the work on incidental word learning (e.g., Rott, 1999; also see Peters, this volume), the role of frequency of encounters with the same MWIs has figured high on the research agenda. What the evidence to date suggests is that it will typically take multiple encounters with an MWI for measurable learning outcomes to emerge. A study which illustrates this is Webb, Newton, and Chang (2013), where EFL learners read short stories containing 18 preselected verb + noun expressions (e.g., raise + question). The texts were accompanied by an audio-recording of the stories for the learners to silently read along with. The duration of the reading-while-listening activity was slightly over 30 minutes. Different versions of the texts were created such that learners encountered the same MWIs just once,
five times, or more than five times. Immediate post-reading tests confirmed the expectation that frequency of encounters positively influences the chances of acquisition. However, they also revealed that meeting the MWIs five times still generated only modest outcomes, with a success rate of just 12% on a test where the learners were presented with the verb of the expression and were asked to supply the missing noun (e.g., raise ______). A conceptual replication of Webb et al. (2013) was conducted by Pellicer-Sánchez (2017), who invented six adjective + pseudo-noun combinations and incorporated these in a text (of about 2,300 words). In one version of the text, they were incorporated four times each. On a post-reading test (administered one week later) where the participants who had read this text were asked to recall the adjective that preceded each pseudo-noun, the success rate was just 7%.

Findings such as these demonstrate that MWIs can be acquired through reading, but they also give reason to believe that the pace of incidental uptake of most MWIs will be slow when learners read authentic (i.e., non-manipulated) texts. This is because, although MWIs as a class are omnipresent, very few individual members of that class will occur repeatedly in the same stretch of text. For example, Boers and Lindstromberg (2009, pp. 42–43) found only one instance of tell + truth in 100 pages of a police story (a genre where use of this expression might be expected). In settings where a learner is not regularly exposed to substantial amounts of input, it is not difficult to imagine that the interval between two encounters with the same MWI may be too long for the learner to recognize it as a recurring word combination. The recognition of recurrent word combinations may also be hindered by morphological and syntactic variability. For example, if a learner were to meet an utterance such as because of a criminal offence he was believed to have committed years ago, the syntagmatic distance between offence and commit may obscure their collocational bond. In addition, word partnerships need not be totally exclusive. For instance, learners will meet the noun research not only in the company of conduct but also of do and carry out, and so it may take many encounters with this noun for them to discern its collocational scope.

MWIs are perhaps especially likely to escape a learner’s attention during content-focused reading (or listening) if they consist of familiar words (e.g., do your homework; have a dream) and when their meaning is (perceived to be) transparent. Studies that make use of eye tracking have indeed shown that short and highly familiar words (e.g., do and have) attract little attention during reading (e.g., Rayner, Slattery, Drieghe, & Liversedge, 2011; Williams & Morris, 2004). If, in addition, the semantic contribution of one part of an MWI is negligible, it is understandable that learners give precedence during processing to the part that carries the most meaning (e.g., homework and dream rather than do and have). If that suffices for the learner to make sense of the message, then the collocational patterning may go unnoticed. That content words but not their phraseological patterning tend to be prioritized by learners was illustrated in a study by Hoang and Boers (2016), where learners were asked to retell a story they had read and listened to twice. The original text contained a high number of MWIs, but the learners were found to reproduce hardly any of these in their own rendering of the story. They did extract content words from the original text, including ones featuring in the MWIs, but stripped bare of the phraseological patterning in which these had been met.

If it is true that high-frequency words in transparent MWIs attract little attention, then this also offers an explanation for the persistent interference of L1 in learners’ use of these kinds of MWIs (e.g., Laufer & Waldman, 2011; Nesselhauf, 2003; Yamashita & Jiang, 2010). For example, if do in do homework or have in have a dream attract little attention, then it is not so surprising to find cases of L1 transfer (e.g., “make your homework” from L1 Dutch; “make a dream” from L1 French) (also see Nguyen & Webb, 2017; Wolter & Gyllstad, 2011).
In comparison, one might expect nontransparent MWIs (e.g., idioms) to attract more attention during reading, because learners may be puzzled by them. This is not necessarily so, however. Martinez and Murphy (2011), for instance, demonstrated that learners may not realize a given wordstring (e.g., *over the hill* – “growing too old for certain activities”) is actually an idiom in cases where the available context does not preclude a literal reading of them (“on the other side of the hill”). Littlemore, Chen, Koester, and Barnden (2011) found that international students at a British university not only failed to grasp the intended meaning behind many of their lecturers’ idioms, but also that they were seldom aware of their misunderstanding. The misinterpretations were typically due to transfer from deceptive counterpart expressions in the students’ L1. When idioms do attract attention because they are experienced as puzzling, the next obstacle on the path to learning them, of course, is their very nature – their lack of transparency. Research suggests that contextual clues (if available at all) will not always help (Boers, Eyckmans, & Stengers, 2007). In addition to seeking contextual clues, learners may try to infer the figurative meaning of an idiom through a literal reading of the expression. In fact, experiments by Cieślicka (2006, 2010) have revealed that second language learners tend to be more inclined than L1 speakers to activate a literal reading of the content words of an idiom, despite knowledge of the “idiomatic” meaning of the expression. When it comes to interpreting new idioms, however, it is an inclination which can easily put a learner on the wrong track. This is because the first meaning of a constituent word that springs to mind may not be the meaning which is at the origin of the expression. For example, if they mistake the *wings* in *waiting in the wings* for the wings of a bird (rather than the wings on the side of a theater stage), then this is highly unlikely to lead them to a correct interpretation of this idiom. In other words, cases of homonymy (or polysemy) make this strategy error-prone. Additional interpretation difficulties arise from cross-cultural differences. An idiom may have its roots in a culture-specific domain which the learner is simply not familiar with (Boers, 2003), or it may have a content word whose symbolic nature prompts different associations in the learner’s culture (Hu & Fong, 2010). The most obvious case where an idiom will resist interpretation, of course, is when a key constituent word is totally new to the learner. For example, an intermediate learner is unlikely to know the word *keel* (the lower part of a boat), and so will not be able to draw on such knowledge in an attempt to infer the meaning of *on an even keel* (“making steady progress”).

When reviewing the study by Webb et al. (2013) above, I mentioned that the reading texts were accompanied by an audio-recording of the stories. This is relevant, because mode of input may be yet another factor that influences the rate of MWI uptake from texts. On the one hand, listening input may be helpful because the availability of prosodic cues can make it easier to discern MWIs (Lin, 2012). For example, pauses normally occur at the boundaries of fixed expressions, not inside them, and so pauses can signal that a particular wordstring functions as a unit. On the other hand, a possible downside is that MWIs tend to be produced relatively fast in speech and with phonetic reduction of function words (e.g., articles and prepositions) (Bybee, 2002). As a result, learners may find it hard to “catch” the precise composition of MWIs during real-time listening. However, when a written text is also available, being able to see the words may compensate for this downside.

**Enhancing the Chances of MWI Uptake From Texts**

Several types of text manipulation may help to accelerate MWI learning from reading. One is to embed multiple instances of the same MWIs in texts. The effect of such “seeding” or “flooding” of texts with pre-selected MWIs was actually investigated in the aforementioned
studies by Webb et al. (2013) and Pellicer-Sánchez (2017). In one version of the stories used by Webb et al., readers encountered no fewer than 15 instances of each of the 18 target verb + noun expressions. The immediate post-reading tests showed significantly better uptake in comparison to the reading conditions where the MWIs were incorporated fewer times. It is thus undeniable that seeding texts with recurring instances of MWIs can foster incidental acquisition. It is worth mentioning, though, that as many as 15 encounters still offered no guarantee of productive knowledge. For example, the mean success rate on the test where the learners were prompted to supply the missing noun (e.g., raise ______) was 55%. One of the text versions used by Pellicer-Sánchez in her experiment was seeded with eight instances of six target adjective + pseudo-noun expressions. Again, this appeared to positively influence learning in comparison with a text version containing only four instances, but the success rate on the test which asked the participants to recall the adjectives that went with the given pseudo-nouns nonetheless remained low – 15%. It is of course conceivable that further encounters with the same MWIs would eventually result in robust knowledge, because incidental learning is known to be a gradual, incremental process, driven by continued exposure.

Skeptics may argue that seeding a text with MWIs requires considerable creativity and resourcefulness on the part of the materials writer. An alternative or complementary type of text manipulation is to increase the salience of MWIs in a text. This can be done by means of “typographic enhancement” (i.e., highlighting the presence of MWIs through underlining, using bold typeface, etc.). The rationale for this type of intervention rests on the notion that attention is vital for learning and that steps which direct learners’ attention to features which they might otherwise not pay attention to are therefore useful (Sharwood-Smith, 1993). As discussed earlier, lack of spontaneous attention to MWIs is one of the explanations for their relatively slow uptake, and so typographic enhancement seems a promising way of addressing this problem. This promise, of course, rests on the assumption that learners’ attention is effectively drawn to typographically enhanced MWIs in a text. This assumption was confirmed in an eye-tracking study by Choi (2017). In that study, learners who read a text where MWIs were enhanced (by means of bold typeface) tended to look at these more and for longer than learners who read the same text without any enhancement. Post-reading tests also showed a positive effect of enhancement on memory, thus lending support to the pedagogic implementation of this technique. Additional evidence for the usefulness of typographic enhancement for MWI learning is reported by Sonbul and Schmitt (2013), Szudarski and Carter (2016) and Boers et al. (2017). What the findings appear to suggest is that the increased awareness effected by enhancement can reduce the number of encounters with an MWI that would otherwise be necessary to obtain robust learning outcomes. It would be interesting to find out (through a combination of eye tracking and posttest measures) whether typographic enhancement of an early instance of a given MWI might suffice to increase learners’ intake of subsequent instances even if these are not enhanced.

There are some limitations to typographic enhancement, however. One is that it can only be applied in moderation, because enhancing too much of a text defeats the purpose of making selected items stand out. Another is that learners’ increased attention to the enhanced segments of a text may come at the expense of attention they would otherwise give to the unenhanced segments of the text. Evidence of this side-effect or trade-off effect is reported in the aforementioned eye-tracking study by Choi (2017). A third and perhaps the greatest limitation of enhancement is that, while it can orient a reader’s attention to language forms, it cannot ensure on its own that the learner will grasp the meaning of those forms. In the case of transparent MWIs, this is of course not an issue, but in the case of nontransparent ones it certainly is (unless clarifying context is available).
On a more positive note, however, learners have been found more likely to look up the meaning of enhanced MWIs than unenhanced ones (Bishop, 2004; Peters, 2012). Whether or not learners manage to actually find the desired information in resources such as dictionaries will inevitably depend on the quality and functionality of those resources and on the learners’ skills to navigate them (Chen, 2016; Dziemianko, 2014; Laufer, 2011; also see Meunier, this volume). The learner’s curiosity about the meaning of a given MWI can of course also be satisfied readily by supplying glosses or annotations with the text. This has indeed been done in some investigations of MWI uptake from reading (e.g., Peters, 2012), but the effect of providing these glosses was not the focus of interest (i.e., not an “independent variable”) in these studies. Again, it might be useful to know how explaining the meaning of an MWI on an early encounter in a text affects learners’ engagement with the MWI on subsequent re-encounters.

Looking back at the learning conditions discussed in this section, it is debatable whether the learning gains accrued from them should be labeled “incidental”, since deliberate efforts are obviously made here to orient learners’ attention to language items, even though the primary interest supposedly lies with the content of texts. Such conditions are perhaps more aptly labeled “semi-incidental” instead. In the following section, we turn to activities in which it must be clear for the learner that the intention is to learn MWIs.

Before doing so, one more observation worth making about the body of research on “incidental” MWI learning is that few of these studies include an exploration of whether a given input condition fosters learning of some (types of) MWIs better than others. It is true that most of the studies selected a set of target MWIs that were alike in broadly structural terms (e.g., verb + noun, or adjective + noun combinations), but little attention seems to have been paid, for example, to differences in semantic characteristics of these items, such as their (non-)transparency.

**Factors Likely to Affect the Deliberate Learning of MWIs**

In the realm of deliberate, MWI-focused learning activities, there appears to be a greater inclination to select types of targets on the basis of semantic criteria. For example, McCarthy and O’Dell’s resources for independent study distinguish between “collocations” (2005) and “idioms” (2002), where “collocations” refers to relatively transparent MWIs and “idioms” to relatively opaque ones. (However, see Boers and Webb [2015] for a discussion of the intricacies involved in determining which MWIs are transparent and which are not – for a given language learner.)

Let’s first consider activities that mostly concern “collocations”. As these are generally deemed to be semantically transparent, such activities tend to be oriented towards accurate production of the MWIs. A well-recognized factor affecting the success of MWI learning is that of congruency with counterpart MWIs in the learner’s L1: When counterpart expressions in the learner’s L1 are non-congruent (e.g., in Dutch “do a suggestion” instead of make a suggestion, and “with other words” instead of in other words), this will hinder learning. This type of hindrance is a case of “inter-lexical” interference. A study illustrating its impact is Peters (2016), where learners were given a list of 18 MWIs and their L1 translations and practiced these in exercises (e.g., fill-in-the-blank). Half of the MWIs were congruent with the counterpart expression in the learners’ L1 while the other half were not. Congruency emerged as a strong predictor of accurate responses in a productive recall test. Because L1 interference appears so persistent in learners’ renderings of L2 MWIs, Laufer and Girsai (2008) make a strong case (supported by findings from a quasi-experimental classroom
study) for instruction that explicitly draws students’ attention to L1 – L2 contrasts, for example through translation exercises.

Another factor affecting learning success is the phenomenon of “intra-lexical” interference, where an MWI constituent is erroneously substituted by another L2 word which bears a resemblance to it. This may be due to a formal resemblance, for example, when *in competes for selection with* on (“in purpose” instead of *on purpose*) or when *make competes with* take (“make a picture” instead of *take a picture*). Or it may be due to a semantic resemblance, such as when *say competes with* tell (“say the truth” instead of *tell the truth*). Confusability appears particularly high when words competing for lexical selection lack semantic distinctiveness (e.g., *do* and *make*). Many authors of MWI-focused instructional materials are clearly aware of this problem, because they design exercises where learners are presented with sets of such confusable items and required to sort them out (Boers, Dang, & Strong, 2017). Whether this is actually a judicious approach is a matter of some debate, however. Webb and Kagimoto (2011), for example, found that presenting learners with adjective + noun expressions where the adjectives bear semantic resemblance (e.g., narrow escape and slim chance; tall order and high spirits) resulted in poorer learning than when the co-presentation of such items was avoided. Boers, Demecheleer, Coxhead, and Webb (2014) tested the effectiveness of various exercise formats for practicing verb + noun expressions (e.g., make a suggestion; do business) used in commercially available EFL textbooks, and found generally very poor learning outcomes. Many of the participants’ wrong responses in the posttests were attributable to interference from the other lexical items they had been presented with in the exercises. This happened particularly often when the exercises were of a matching format, where the MWIs were broken up and the learners were required to reassemble them (e.g., by choosing the appropriate noun to go with a given verb). Although vocabulary exercises are evaluated more extensively in a different chapter (Laufer, this volume), it is worth mentioning a few ways in which the risk of intra-lexical interference of the kind discussed here can be reduced. One is to design exercises where the MWIs are kept intact from the very start. For example, Boers et al. (2017) compared fill-in-the-blank exercises where learners were required either to choose appropriate verbs from a list (*make*, *take*, *pay*, etc.) to complete verb + noun expressions (e.g., a ceremony to ________ tribute to soldiers who died in the war) or to choose from a list of intact expressions (*make a contribution*, *take a toll*, *pay tribute*, etc.) to complete blanks (e.g., a ceremony to ________ to soldiers who died in the war). Delayed posttests revealed the latter exercise type to be significantly more effective. Another way is to minimize error at the exercise stage by providing sufficient opportunities for learning the target MWIs prior to the exercise, such that the exercise serves the purpose of (successful) retrieval practice (see Lindstromberg, this volume, Nakata, this volume) rather than as an introduction of new language through a trial-and-error experience. Since these suggestions seem uncontroversial and even commonsensical, it is surprising to find that about half of the MWI-focused exercises in a large sample of EFL course books analyzed by Boers et al. (2017) are *not* preceded by exemplars of the MWIs needed in the exercise and that about half of these trial-and-error exercises require learners to assemble broken-up MWIs, thus potentially increasing the risk of intra-lexical interference. Also noteworthy is that MWIs are typically practiced just once, i.e., in only one exercise, in most course books. And yet, research also shows that during deliberate work repeated engagement with the same MWIs makes a big difference (Peters, 2014; Zhang, 2017).

When it comes to the intentional learning of idioms, the challenge is not only to remember their lexical composition but also the meanings of these items, since idioms, by definition, have meanings that do not follow straightforwardly from adding up the basic meanings of
their constituent words. As already mentioned, however, not all idioms are equally non-transparent. It is to be expected that learners will find the meaning of an idiom which they experience as transparent (e.g., *to keep a straight face*) easier to remember than that of an idiom whose literal meaning looks unrelated to the figurative meaning (e.g., *to paint the town red*). This expectation was borne out in an experiment conducted by Steinel, Hulstijn, and Steinel (2007), where learners studied a series of L2 idioms paired with L1 explanations. Interestingly, a factor that was found to be an even stronger predictor of posttest recall success in the same experiment was the degree of imageability of the idioms, i.e., how readily an expression calls up a mental picture of a concrete scene. For example, *to be/get off the hook* was rated as much more imageable by the participants than *to hang fire*. Imageability is strongly associated with concreteness of meaning (Paivio, 1986; also see Peters, this volume, and Lindstromberg, this volume), and so it is not surprising that the meaning of highly imageable idioms is easier to remember than that of idioms which evoke no imagery – all else being equal. The imageability of an idiom derives from a literal reading of the expression, as long as this literal reading can be made sense of. A literal reading of *off the hook* can readily evoke the image of a fish that has managed to wriggle free of a fisherman’s hook. *Hang fire*, on the other hand, would seem less easy to “picture”.

If imageability is an influential factor in (intentional) idiom learning, then it is worth investigating if particular target idioms can be made more imageable, and thus more memorable, through instructional intervention. A tried and tested way of doing this is to briefly clarify the (plausible) literal underpinning of an idiom where this underpinning is not already obvious (see Boers & Lindstromberg, 2009, for a review). Clarifying the theater origin of *waiting in the wings* and the sailing origin of *on an even keel* could be examples of this approach. It is noteworthy in this context that recent editions of several idiom dictionaries also provide information about the (plausible) literal underpinnings of idioms – where such knowledge is available. An alternative or complementary way of enhancing the imageability of a figurative idiom, of course, is to provide a visual illustration of its literal meaning (Szczepaniak & Lew, 2011).

The above discussion about idioms concerned first and foremost the learning of their meanings. With regard to learning the lexical makeup of idioms there is another feature exhibited by many idioms that merits mention – inter-word phonological repetition, as in the case of rhyme (e.g., *be left high and dry*) and alliteration (e.g., *set the scene*). In English phraseology, it is the incidence of alliteration that is particularly conspicuous (Boers & Lindstromberg, 2009), especially among idioms (e.g., *turn the tables*), aphorisms (e.g., *it takes two to tango*), similes (e.g., *good as gold*), and binomials (e.g., *part and parcel*) (Lindstromberg, 2018). It appears that such a sound pattern has the potential to give wordstrings (e.g., *time will tell; a slippery slope*) an advantage over near-synonymous ones (e.g., *time will say, a slippery track*) in the “competition” to attain MWI status in the language. Research indicates that a structural pattern such as alliteration and (near-) rhyme (e.g., *go with the flow, cook the books*) can also render L2 expressions relatively memorable (see Eyckmans & Lindstromberg, 2017, for a review), at least when learners’ attention is directed to the presence of the pattern (e.g., Eyckmans, Boers, & Lindstromberg, 2016). The evidence for a comparative advantage of alliterative and/or rhyming MWIs in learning conditions without attention-directing has been mixed and less compelling. (e.g., Boers, Lindstromberg, & Eyckmans, 2014). It may nonetheless be worth taking such structural patterns into consideration also when examining and comparing the rate of uptake of MWIs during incidental learning activities such as reading-while-listening, in case they do facilitate uptake (Boers, Lindstromberg, & Webb, 2014). An unexplored possibility to date appears to be the use of
typographic enhancement to direct learners’ attention to patterns such as alliteration during reading.

Looking at a Particular Case: Phrasal and Prepositional Verbs

The class of MWIs known as phrasal and prepositional verbs (e.g., look it up, make up a story, look up to someone) helps to illustrate several of the factors discussed earlier, but also to illustrate two extra ones. One of these extra factors is the typological proximity vs. distance between the learner’s L1 and the target language. Although there are no grounds for believing that languages differ in their overall degree of “formulaicity” or “idiomaticity” (Stengers et al., 2011), there may be a class of MWIs in the target language that is absent from (or rare in) the learner’s L1. For many learners of English this holds true for phrasal and prepositional verbs (henceforth PVs). The absence of a structurally similar category of phrasal units in these learners’ L1 (e.g., in the case of romance languages) is one explanation for their poor knowledge of English PVs as attested, for example, in Garnier and Schmitt (2016). It also helps to explain why such learners tend to avoid using them when single-word alternatives (e.g., refuse instead of turn down) are available (Dagut & Laufer, 1985; Liao & Fukuya, 2004; Siyanova & Schmitt, 2007). For learners whose L1 does have structural equivalents, learning English PVs has been shown to be less troublesome (Hulstijn & Marchena, 1989; Laufer & Eliasson, 1993). In short, the case of PVs demonstrates another level of L1 influence than the sort of inter-lexical interference we discussed above in connection with collocational partnerships, because – depending on the learners’ L1 background – it can concern a whole class of MWIs.

Many English PVs occur frequently in natural discourse and, given the positive association between frequent encounters and uptake, this can be expected to aid acquisition. This, however, leads us to the second factor which PVs help to illustrate – their highly polysemous nature (Gardner & Davies, 2007). The same verb + particle combination can have various uses (e.g., make up a story vs. make up after an argument vs. make up one’s face vs. make up the difference vs. make up a bed vs. make up for something). Learning to discriminate between these various functions as they occur in input texts is likely to require many encounters with the same verb + particle combination, and learning PVs deliberately must be intricate as well, because it requires establishing different meaning correspondences for a single form.

Add to this some of the factors discussed earlier, and the complexity of mastering PVs becomes even more apparent. For example, the words which make up PVs – short (high-frequency) verbs and prepositions – tend not to be particularly distinctive, and so (1) they are not likely to attract much spontaneous attention and (2) they are susceptible to the kind of intra-lexical interference already mentioned in connection with verb-noun collocations (Strong & Boers, 2019). Another factor is the non-compositionality (and thus likely non-transparency) of many PVs. In that regard, PVs pose interpretation problems akin to (other) idioms. In some cases, the form-meaning correspondence of a figuratively used PV can be made more memorable if a plausible explanation for this correspondence is available. For example, the use of out in PVs such as find out and figure out may be explained as follows: (1) people associate understanding/knowing something with seeing it (hence expressions such as I see, meaning “I understand”); (2) if something is inside a closed container one cannot see it, and thus not “know” it; (3) if it is brought out of the container, it becomes visible and thus “known”. Classroom experiments have yielded some support for such interventions (see Boers, 2013, for a review). There are limits to this, however, because (1) finding
explanations such as these is certainly not always easy for teachers (but see Lindstromberg, 2010, for a helpful resource) and (2) not all such explanations may be perceived by learners as plausible, especially if the language manifests apparent contradictions (e.g., given the preceding seeing-is-knowing explanation for out in find out, why then do we say look it up and not “look it out”?). When we discussed the learning of idioms, we mentioned how catchy sound patterns such as alliteration and rhyme can render the lexical composition of a fair number of those MWIs comparatively memorable. Unfortunately, the class of PVs has very few members that are amenable to this.

On a more positive note, although many PVs are polysemous, not all their uses are equally common. Once the frequent uses have been identified through corpus research (Garnier & Schmitt, 2015), these may then be given priority in instructional materials, in the same spirit as giving priority to high-utility words over lower-utility ones in language programs (Nation, 2013).

**Future Directions**

While considerable advances have been made in identifying factors that affect the learning of MWIs, several questions remain. One set of questions concerns the profile of the learners. For example, age may matter. If it is true that adult learners’ familiarity with written language leads them to treat words rather than larger units as the building blocks of language (Wray, 2002), then one may wonder if young L2 learners are more inclined than (literate) adults to pick up “chunks” from L2 discourse (e.g., Myles, Hooper, & Mitchel, 1998). Another learner characteristic is (phonological) short-term memory, which has already been shown to play an important part in other domains of language learning (e.g., Martin & Ellis, 2012; Speciale, Ellis, & Bywater, 2004), and which seems very likely to matter also here, given the polyword nature of MWIs. A third factor inviting further research is the nature of learners’ prior L2 learning experience. Of particular pedagogic relevance here is the extent to which instructional programs with a regular focus on MWIs (e.g., Boers, Eyckmans, Kappel, Stengers, & Demecheleer, 2006; Jones & Haywood, 2004; Peters & Pauwels, 2015) foster a long-term appreciation of phraseology, such that learners will autonomously notice and learn MWIs long after completing the instructional program.

Another question is to what extent the factors discussed in this chapter affect the learning of MWIs in various language types (e.g., Durrant, 2013). The research on MWI learning to date is no different from the larger body of research on second or foreign language learning in that the vast majority of the publications focus on English as the target language.

A final point worth reiterating is that it would be helpful if future investigations of the rates of MWI learning observed under particular input conditions or pedagogic interventions could also examine differential effects at the item level. Owing to the great diversity of MWIs as well as the multifaceted nature of MWI knowledge, it is very likely that instructional choices that work well for some MWIs and for some purposes will not work as well for others. Horses for courses, so to speak. In this regard, we have mentioned potential factors such as compositionality, congruency with L1, frequency of occurrence, collocational strength, collocational proximity, length of the expression, morpho-syntactic fixedness, and catchiness of intra-lexical phonological patterns. All these concern MWIs as whole units, however. Meriting further research as well is how features of the building blocks of MWIs, i.e., their constituent words, influence their learnability and can inform pedagogic intervention.
Further Reading


This edited volume provides much greater coverage of the research on the processing and acquisition of L2 figurative expressions, such as idioms, than could be offered in the present chapter.


This edited volume offers state-of-the-art reviews of research on the nature, processing, and acquisition of formulaic language (an umbrella term for a range of multiword items). Five of the reviews are pedagogy oriented.

Related Topics

Defining multiword items/types of multiword items, learning single-word items vs. multiword items, processing single and multiword items, incidental vocabulary learning, deliberate vocabulary learning, resources for learning multiword items, evaluating exercises for learning vocabulary, measuring knowledge of multiword items, key issues in teaching multiword items, key issues in researching multiword items

References


The Learning of Multiword Items


