Introduction

Teaching single words typically refers to presenting individual or isolated words while providing learners with some means of access to their meaning. It is a type of instruction that may or may not involve engaging learners in concurrent tasks while the target items are being presented. Examples of teaching single words include when an instructor shows pictures of target words and pronounces each target word one by one, when word-picture or translation pairs are presented on a screen or on flash cards, and when someone provides the name of an item for a learner when the item is encountered in the immediate environment (e.g., learner: What is that called?; native speaker: railing). Although vocabulary teaching of this nature is only one of the many options available to instructors (and other interlocutors) for facilitating vocabulary learning, it is one that can be useful in some contexts. It can be considered as an option, for example, in the following contexts: when a learner needs to know a given set of novel words in order to complete a communicative act, to complete a specific task, or to understand some aspect of content being studied, such as a historical event, a biological process, or some piece of information related to linguistics.

Critical Issues and Topics

Among the many issues faced by language instructors are the following: (1) Under what circumstances should I teach single words? (2) What are the most effective techniques for teaching single words? Answering these questions will be the primary focus of what follows.

Types of Vocabulary Learning

To begin, any discussion of teaching single words should be couched within the larger context of the many possible types of vocabulary learning in which a learner can engage. These can be divided along two main fronts: (1) the extent to which vocabulary is learned incidentally as opposed to intentionally, and (2) the extent to which vocabulary is learned as individual items as opposed to being learned with other words and other linguistic structures, such as those that reflect the morphology, syntax, semantics, pragmatics, and sociocultural
properties of any given language. More specifically, one can distinguish between (1) incidental vs. intentional vocabulary, on the one hand, and (2) isolated vs. integrated vocabulary learning, on the other. Before appraising the extent to which these two sets of distinctions might be viewed as two continuums, let us consider some definitions and prototypical examples of the incidental-intentional and isolated-integrated distinctions.

**Incidental vs. Intentional**

*Incidental vocabulary learning* refers to when learners pick up vocabulary – words, lexical phrases, or both – without intending to do so, such as when a learner reads a passage for meaning and learns a new word or two without noticing that learning has occurred. Another example would be when a learner is focused on buying a series of items in a store and in the process of doing so manages to learn several new words for items without having paid attention to the process of learning these words. *Intentional vocabulary learning*, on the other hand, refers to when a learner intentionally learns one or more words or lexical phrases. Examples of intentional vocabulary learning include studying a series of target words and expressions for a pre-announced vocabulary quiz, looking up any new word or phrase that appears in a reading with the predetermined purpose of intentionally learning the items, or asking a native speaker the names of specific words or phrases and then consciously attempting to commit these items to memory (see also Lindstromberg, this volume).

**Isolated vs. Integrated**

*Isolated vocabulary learning* refers to when words or lexical phrases are learned in absence of or nearly in the absence of other words, lexical phrases, and other linguistic structures and information. One example of isolated vocabulary learning is learning the word for “apple” in another language – *manzana* in Spanish, *tagar* in Basque, *poma* in Catalán, *xocotl* in Nahuatl, *bilasáana* in Navajo, and so forth – by viewing a picture of an apple and hearing the word pronounced out loud or seeing a written version of the word. Learning the same word by using a translation pair, such as by showing cards or slides with *apple = manana* written on them or by saying the pair out loud in the spoken mode, would be another example of isolated vocabulary learning of this nature. In addition, isolated vocabulary learning need not be limited to single words only. One could use word-picture or translation pairs to learn any type of multiword lexical phrase as well, such as picture or translation-based and spoken or written versions of *on the one hand = por una parte* (for one part) and *It is raining cats and dogs = Llueve a cántaros* (*It is raining pitchers*). What is critical is that both the single-word version (isolated word learning) and the lexical-phrase version (isolated learning of lexical phrases or formulaic language) always appear as isolated items for this type of learning; they do not appear in the context of other words, phrases, or other linguistic structures, as would be the case with input that goes beyond the single vocabulary item in question. What is more is that isolated vocabulary learning can also occur in incidental contexts of learning. Consider the example provided earlier of learning new words while shopping. In such a context, a learner may be exposed to new words or lexicalized multiword phrases such as *lettuce, butter, soap, detergent, aluminum foil, or ice cream* as isolated lexical items on signs in the immediate environment and may pick up one or more of these terms without consciously intending to do so. This type of vocabulary leaning is isolated albeit incidental in nature.

*Integrated vocabulary learning*, in contrast, involves learning new words or phrases in the presence of other words, phrases, other linguistic structures or features, or any combination
of these. It typically involves language input, or samples of a target language, that go beyond single words or phrases. It can involve sentence-level input, such as when the word *apple* (*manzana*, *tagar* , *poma*, *xocotl*, *bilasáana* . . .) is learned by hearing the sentence *I think these light-green Granny Smith apples are my favorite fruit.* Sentence-level input of this nature not only provides opportunities to ascertain the meaning of “apple” and to connect it to the word-form *apple* (whatever its form may be in any given language) but also provides opportunities to acquire language-specific meanings, uses, and collocational properties of the word. In this particular sentence-level example, the learner is exposed to *Granny Smith* as one type of apple, a connection between the word *green* and *apple*, and an example of the plural form of *apple*, illustrating a bit of how English morphology works for this word. The more that learners are exposed to information of this nature in the input that goes beyond single lexical items, the more opportunities they have to acquire, incrementally, a more complete range of the meanings, uses, and collocational properties of vocabulary. With regard to language-specific meanings of words in particular, note that the challenge of learning the *polysemy* (multiple but typically related meanings) and the *homonymy* (different unrelated meanings) of words and phrases can be a daunting task. For example, having learned the English word *soap* as an isolated noncount noun in reference to washing will not prevent the confusion that a learner might face at a later point in time when exposed to a sentence such as *You know, I pretty much always watch my soaps from 1 to 3.*

**Incidental-Intentional and Isolated-Integrated as Continua**

While these definitions and examples are helpful in understanding clear-cut distinctions between incidental vs. intentional vocabulary learning and isolated vs. integrated vocabulary learning, both sets of distinctions can be viewed as continua with *incidental* and *intentional* being endpoints in one case and *isolated* and *integrated* being endpoints in the other. Early research on second language vocabulary learning focused substantially on the distinction between incidental and intentional vocabulary learning (see, for example, books by Coady & Huckin, 1997; Schmitt & McCarthy, 1997), including questions about how much of each type of learning might be needed or most effective, and the view of incidental vs. intentional vocabulary learning as a continuum was part of the discussion (Coady, 1997; Gass, 1987). As with the intentional-incidental distinction, the distinction between isolated vs. integrated vocabulary learning can also be viewed as a continuum. In this case, one endpoint on the continuum represents vocabulary learning that is fully or largely isolated in nature, and the other endpoint represents vocabulary learning that is fully or largely integrated in nature.

Critically, the *isolated-integrated* distinction and its corresponding continuum are applicable regardless of whether a word or phrase is learned intentionally or incidentally. For example, the word *butter* can be learned as an isolated item intentionally based on a word-picture pair a learner is studying for a vocabulary quiz or it can be learned incidentally as an isolated item incident when a learner wants to buy butter in a supermarket, encounters the written form of the word in isolation on a sign, and picks up the word without intentionally trying to learn the word. In this latter case, if the learner encounters the butter in the supermarket and stops to make a conscious attempt to remember the word, perhaps repeating the word “butter, butter, butter” mentally, then this type of learning becomes less incidental and more intentional in nature, but it still remains isolated in nature. The more that the learner encounters the word *butter* along with other words and phrases, however, the less isolated and the more integrated this example becomes. The learner might encounter *salted butter* or *unsalted butter* as input, for example, or a supermarket employee might say to the learner:
You can find the butter along with all of the other dairy products we offer on the shelves at the very back of the store. These latter examples constitute less isolated and more integrated opportunities for vocabulary learning. As such, they also demonstrate how the isolated-integrated distinction in vocabulary learning can also be viewed as a continuum.

An I-Squared Classification System for Vocabulary Learning

Considering that both the intentional-incidental and isolated-integrated distinctions can be viewed as continua, the combination of these two continua on two axes can provide a classification system for numerous distinct types of vocabulary learning, all of which vary in degree according to the extent to which they are intentional, incidental, isolated, and integrated in nature. The classification system presented in Figure 30.1, dubbed I-squared, was designed and is being proposed here for this purpose. Using this classification system, points A, B, C, and D in the figure represent, respectively, cases of purely intentional and isolated (A), incidental and isolated (B), intentional and integrated (C), and incidental and integrated (D) types of vocabulary learning. The numbers in the figure depict levels at which different types of vocabulary learning can be classified (“most” meaning 100% to the extent to which this level is possible): point A = 1:1 (most intentional, most isolated); point B = 9:1 (most incidental; most isolated); point C = 1:9 (most intentional, most integrated); and point D = 9:9 (most incidental; most integrated).

What would constitute examples of distinct types of vocabulary learning following this classification system? An example of A would be intentionally studying word-picture pairs in preparation for a vocabulary quiz. An example of B would be learning the word for a grocery item without intending to do so when the word appears on one or more occasions in isolation (such as on a sign) in the input. An example of C would be intentionally learning a series of words or phrases while also intentionally trying to learn a series of language-specific meanings and uses of the words or phrases in question by purposefully attending to phrase-level, sentence-level, or discourse-level input. An example of D would be when a learner picks up a new word or phrase without intentionally trying to do so while listening to extended discourse (or reading an extended text) that happens to be rich in information about multiple meanings, uses, and collocational properties of the new words or phrases in question.

Using the same classification system, point E in Figure 30.1 would refer to any example of vocabulary learning at a level of 5:5 (the middle position on the 1-to-9 scale), which should correspond to 50% intentional, 50% incidental, 50% isolated, and 50% integrated. What might be a good example of vocabulary learning at this level? Any answer to this question is bound to be debatable given the challenge of quantifying degrees of intentional vs. incidental vocabulary learning as well as degrees of isolated vs. integrated vocabulary learning on the other. Nevertheless, consider the following possible example for point E as one possibility: a learner living in a country where the target language is spoken rents an apartment and is presented with a series of rules that tenants need to follow. Before reading the list, the person makes the following mental note just before reading the list: “I really should try to learn and remember as many of the new terms in these rules as I can”. The learner then reads the list, focusing primarily on the meaning of each sentence, and looks up the meaning of some but not all of the novel words in this input, and “halfway” makes a conscious effort to learn some (but not all) of the words in the list of rules. The type of input provided by the list of rules is about “halfway” useful when it comes to exemplifying language-specific meanings, uses, and collocational properties of the novel words in question. The sentences are fairly short, but the information about meanings, uses, and collocations is helpful at what might
be considered an “average” (50%) level for the novel vocabulary in question. This example of vocabulary learning might be considered a good example of the 5:5 level following the classification system depicted in Figure 30.1.

**What Is Common to All Types of Vocabulary Learning?**

Before discussing advantages and disadvantages of teaching single words as one of many options for vocabulary instruction, it is useful to point out a critical element that is common to all four of the types of vocabulary learning represented by the endpoints of the two continua in Figure 30.1 (points A, B, C, and D) and common to point E at the 5:5 level as well as any other point that could be added. What all of these types of vocabulary learning have in common is that they all begin with input. Without input, vocabulary learning does not happen, and language acquisition in general does not happen. Remembering that vocabulary learning starts with input, regardless of how intentional or isolated it may be, is a critical point for language instructors to remember.

Imagine, for example, that a language instructor decides to ask students to complete a series of “vocabulary-focused” activities that require them to identify sets of words that do and do not constitute viable collocations in a language, providing phrases to students such as *crystal clear* and *shattered glass* as correct examples and *quartz clear* and *burst glass* as incorrect examples. Activities such as this raise the following questions: How could any student possibly do this activity correctly if they have not been exposed to *crystal clear*
and *shattered glass* previously in the input, and most likely, on more than one occasion? Is it problematic to present incorrect collocations such as *quartz clear* and *burst glass* to students as part of the activity? Will students process the incorrect examples as real input, especially if they have not learned the correct versions? Input-related questions such as these need to be considered when it comes to providing effective vocabulary instruction, regardless of the particular type or context of vocabulary learning at hand.

**Advantages and Disadvantages of Intentionally Learning Single Words in Isolation**

As the preceding discussion should help to clarify, learning single words in isolation need not always imply intentional learning. It is possible to learn single words incidentally when the correct circumstances arise. Cases of isolated and incidental single-word learning (Level 9:1 in the *I*-squared classification system) afford learners with the advantage of being able to focus on a single word at a time, however uncommon full-fledged cases of this type of learning may be. This being noted, let us consider cases of intentional learning of single words in isolation (Level 1:1 in the *I*-squared classification system), which commonly involve the presentation of word-picture pairs or translation pairs as a learner intentionally tries to learn each target word that is presented. What are the advantages and disadvantages of this type of vocabulary learning?

**Advantages**

One notable advantage of intentional learning of single words in isolation concerns its high degree of transparency for mapping between word form and word meaning. Single-word learning in isolation typically provides the learner with one word form and a clear depiction or translation of its meaning. If the word can be represented visually in an unambiguous fashion, as in the case of concrete nouns such as *apple*, *chair*, or *squirrel*, a simple picture or photo of the word referent usually can suffice. One of the interesting features about learning single words in this manner is how it can be viewed as a microcosm of language learning in general. As with all language learning in general, learning individual words in isolation involves processing a new linguistic form as input, attaining access to the meaning of the form, and then creating a mental mapping between the form and meaning.

For single words whose meaning cannot be depicted clearly as concrete nouns using pictures or photos, translations may provide learners with unambiguous access to word meaning. However, involving first language (L1) translations of target second language (L2) words may slow, at least arguably, development of the type of conceptual mediation (direct connections between word forms and their meanings) that is typical of fluent advanced L2 learner-users (see Kroll & Sunderman, 2003, for more on development from lexical mediation, which involves connections through L1, toward conceptual mediation as learners increase in L2 proficiency over time). Providing sentence-level definitions to clarify meanings of single words does not constitute another option for clarifying meanings of target words during “single-word learning in isolation” per se because definitions, by their nature, involve integration of other words and phrases that are related to the target word in question, situating this type of learning somewhere else than 1:1 in the *I*-squared classification system, perhaps at 1:3 or even higher on the isolated-integrated axis.

Another advantage of intentional learning of single words is that it allows a learner, instructor, language program director, or any combination of these three to plan for vocabulary
learning in a more concrete and concise manner than do other types of vocabulary learning, such as those that rely on incidental learning. With intentional learning of single words, one can easily select target words on the basis of their relative frequency in a language, ensuring exposure to and potential learning of different pivotal thresholds of word knowledge that have been focused on in the vocabulary research literature. For example, target thresholds of the 2,000 or 3,000 most frequent words in a language can be considered (see Dang, this volume; Nation & Waring, 1997; Nation, 2016; Vilkaitė-Lozdienė and Schmitt, this volume, for more on frequency and levels of language coverage). Single-word learning also can be used to focus on words that are essential for beginning language learning (see Dang & Webb, 2016), as well as words that can be selected on the basis of their relationship to a special field, such as medicine or business (see Liu and Lei, this volume), or a particular source of input, such as a book or a movie, that a learner is going to be reading or listening to while viewing.

Disadvantages

Perhaps the most critical disadvantage of learning single words in isolation is how this type of learning does not provide learners the language-specific meanings, uses, and collocational properties of words a learner needs to really know a word. Knowing a word involves not only learning the word form, its meaning, and a mapping between the two. It involves learning an array of other types of knowledge and development of other types of abilities (see Nation, this volume), including the following.

1. Knowing multiple denotative meanings of the word, such as how back can mean both a part of the body and “to support”.
2. Knowing connotative meanings of the word, such as how fresh or unpolluted could be used to describe the same air, but fresh is more positive in nature.
3. Knowing the collocational properties of the word, such as in the case of soft pillow instead of *malleable pillow.
4. Knowing lexicalized formulaic expressions in which the word is used, such as around the corner and to be cornered for the word corner.
5. Knowing idiomatic expressions in which the word appears, such as once in a blue moon for the words blue and moon.
6. Knowing morphosyntactic properties and syntactic projections of the word, such as how the verb put requires an object and a place (e.g., put the book on the table).
7. Being able to utilize all of the preceding knowledge in a fluent manner for both comprehension and production of language, such as when a learner of English is able to say They wrapped the cake in aluminum foil in a fluent manner without hesitating to produce any of the individual words or word combinations, such as aluminum foil, or when a learner of Spanish is able to write ¡Mira cómo nada ese ornitorrinco! “Look how that platypus is swimming!” without stalling to produce the word ornitorrinco while maintaining the appropriate sentence structure in which this word appears.

Single-word learning in isolation does not provide learners with what they need to develop all of these types of knowledge and abilities because, by definition, it involves word-level input only, which provides only one level of information about the word form and its meaning. Certainly, multiple meanings of a single word could also be taught using word-level input only, but it is sentence-level and discourse-level input that are needed to move forward.
on all seven of the fronts listed above as they develop and refine language-specific lexicosemantic space for words gradually over time.

Another disadvantage of learning single words in isolation is that some words, by their nature, do not lend themselves well to this type of learning. Words that are difficult to depict in pictures and photos in transparent manner (e.g., redundant, clarity, frankly) can be translated for single-word learning, but extensive use of translation-based learning may limit learners in their development of the type of knowledge they need for fluent use of target words. For some target words, even the option of translation can fall short. Consider the challenges of teaching an English word such as base in isolation. Which meaning of the word should be taught first? A military base? Base as in baseball and other sports? Base as in the foundation of a structure? One could attempt to teach all of these meanings one by one without involving other words or sentence-level input, but why attempt to do so in this manner? After all, what learners need is to be exposed to different word combinations (phrases) with base and sentence-level input that includes base in order to develop appropriate English lexicosemantic space for this word.

Finally, another disadvantage of single-word learning in isolation is the extent to which this type of learning may not transfer to fluent use of the words in question in more natural communicative use of language. By definition, learning single words in isolation does not provide learners with the type of data that they need in order to be able to integrate these words fully among other words within their developing mental lexicon and overall developing linguistic system for any given language. Even if a word does lend itself well to being learned as a single item, teaching it that way and learning in that way does not provide all of the information that learners need to be able to incorporate the word mentally in a manner that allows them to be able to use the word in a wholly fluent manner. Why not? Because single-word learning is limited when it comes to gaining the types of knowledge and abilities listed earlier in 1 to 7 and because fluent language use involves these types of knowledge and abilities, single-word learning in isolation does not provide all that is needed. This point does not negate, however, that learners may transfer knowledge of L1 words to corresponding L2 words as means of gaining abilities such as those listed in 1 to 7 when it is possible to do so (see Webb, 2007, for evidence of this type of transfer). The point also does not negate how deliberate learning of words can lead to substantially automatic processing of the words in question (see Elgort, 2011, for a study on learning of pseudowords that addressed this issue).

What Works Best?

Having discussed a few of the advantages and some major disadvantages of learning single words in isolation, let us now reflect upon different methods or techniques for teaching and learning words in this manner. Assuming that certain words are going to be taught and learned as isolated items, what are the most effective methods or techniques for teaching and learning them? As reflected in theory and research on lexical input processing (lex-IP), two major options are available to us: (1) structuring input in ways that can lead to input-based effects on word learning and (2) engaging learners in tasks that can lead to task-based effects on word learning (see Barcroft, 2015, on how these two types of effects have informed lex-IP theory and research). This section argues that three clear ways of improving single-word learning are (1) increasing the number of times that target words appear in the input; (2) providing learners with opportunities to attempt to retrieve target words on their own, and (3) presenting target words using input that is enhanced in ways that have been demonstrated to be effective. Additionally, possibly on certain occasions but while exercising caution, mnemonic techniques such as the Keyword Method might also be used to facilitate memory for challenging novel
Key Issues in Teaching Single Words

Increased Repetition

One basic provision that can improve single-word learning in isolation, or any type of vocabulary learning, is increased repetition of the target vocabulary. The well-documented memorial benefit of increasing the number of exposures to an item has a long history in research on human memory for a variety of different types of stimuli (see Greene, 1992). In the area of L2 vocabulary in particular, a longitudinal study by Bahrick, Bahrick, Bahrick, and Bahrick (1993) confirmed the benefits of increased repetition on intentional L2 vocabulary learning over long periods of time while also comparing the impact of different times of (re)study: intervals of 14, 28, and 56 days. The study assessed learning rates after one, two, three, and five years of study and revealed that longer intervals led to lower learning rates over shorter periods of time but higher learning rates over longer periods of time. Other studies on incidental L2 vocabulary learning have also confirmed that increasing the number of times that target words appear in a text augments learning of the words in question (Hulstijn, Hollander & Greidanus, 1996; Rott, 1999).

Opportunities for Retrieval

Another provision that can increase single-word learning and other types of vocabulary learning is providing learners with opportunities to retrieve target vocabulary items on their own after they have been exposed to them as input. Roediger and Guynn (1996, p. 197) defined retrieval as “accessing stored information”. In the case of vocabulary learning, the stored information in question can be a target word that a learner has previously encountered. As with increased repetition, the benefits of providing retrieval opportunities also has a long history in research on human memory. Myers (1914), for example, provided a first demonstration of the benefits of retrieval and the testing effect, which makes reference to the learning benefits of periodic testing. Slamecka and Graf (1978) also demonstrated retrieval-oriented memorial benefits in support of what they referred to as the generation effect, that is, the memorial benefits that arise when we are provided with opportunities to generate target items on our own. Clearly, in order to generate an item, either partially or fully, one must be able to retrieve the item, either partially or fully, as well.

With regard to L2 word learning, several studies have demonstrated the benefits of providing learners with opportunities to retrieve target words. Royer (1973) demonstrated that index-card based learning of English-Turkish word pairs was higher for participants who attempted to retrieve target words during study as compared to participants who were not provided with opportunities to do so. In another study, McNamara and Healy (1995, Experiment 2) found that participants who studied target L2 words while attempting to generate them outperformed those who read target words only as they studied them. The retention rate for the generate group was .756 as compared to .658 for the read group. Consistent with both of these studies, Barcroft (2007) assessed the effects of providing English-speaking L2 learners of Spanish with opportunities for retrieval of target words as compared to a study-only condition in a classroom-based context. The results of the within-participants study, which exposed all participants to both learning conditions, revealed that vocabulary learning was higher in the retrieval-oriented condition as measured by posttests administered immediately, two days...
later, and one week later. The combined findings of all three of these studies strongly favor providing L2 learners with retrieval opportunities during L2 vocabulary learning.

Enhanced Aural Input

Another means of improving single-word learning of vocabulary is to enhance aural input in ways that have been found to be effective. Intriguingly, De Groot (2006) found that playing classical music in the background during L2 learning facilitated L2 word learning. In other studies, Barcroft and Sommers (2005) and Sommers and Barcroft (2007) demonstrated substantially improved learning of the spoken forms of L2 words when target words were presented using multiple talkers instead of a single talker, multiple speaking styles instead of one speaking style, and multiple speaking rates instead of one speaking rate. These findings, which confirm the benefits of acoustic variability based on sources such as these (talker, speaking style, and speaking rate), can easily be incorporated in both online and classroom-based language instruction in order to improve single-word learning considerably. The benefits observed between no talker variability and high talker variability, for example, corresponded to an increase in single-word learning from 38% to 64%.

Mnemonics Anyone? – Um, Maybe

Mnemonics are techniques designed to facilitate or increase memory for different types of items that one may want to remember and recall. For vocabulary learning, one mnemonic technique that has received substantial attention over the years is the Keyword Method (Atkinson & Raugh, 1975), which involves recoding a novel word form into a known word form (or known word forms) and creating a mental picture that connects the known forms. In order to learn the Spanish word *silla* “chair”, for example, one could recode this Spanish word as the English words *See ya!* and create a mental image of a chair saying *See ya!* as someone who was sitting on it gets up to walk away. As such, this mnemonic involves a bit of both input-based manipulation (to the extent that recoding of novel word forms constitutes an input-based manipulation) and a task-based manipulation (to the extent that creating a mental image connecting the recoded form to the meaning of the original novel form constitutes a task-based manipulation).

In their seminal study in this area, Atkinson and Raugh (1975) demonstrated higher learning rates of L2 Russian words for a group who used the Keyword Method as compared to the performance of an unconstrained control group. Since this first study on the Keyword Method, many other studies, such as those by Ellis and Beaton (1993) and Sagarra and Alba (2006), have also demonstrated benefits of the Keyword Method over selected other competing methods of studying vocabulary. In light of mounting evidence in favor of the Keyword Method, researchers such as Hulstijn (1997) called for increased use of the Keyword Method in L2 instruction.

Other studies, however, have found that the Keyword Method does not always lead to higher amounts of word learning when compared to competing methods such as certain types of rote rehearsal (Barcroft, Sommers, & Sunderman, 2011; Kole, 2007; van Hell & Mahn, 1997), and critically, studies also have provided convincing evidence that the Keyword Method can lead to the development of qualitatively different lexicosemantic representations when compared to other more “naturalistic” types of word learning, such as word-picture based learning of single words. Barcroft et al. (2011) (see also Kole, 2007), found, for example, that not only did the Keyword Method not lead to significantly higher rates of L2 Spanish vocabulary learning when compared to repeated rehearsal as a competing technique, it also led to the development of qualitatively different lexicosemantic representations that maintained the odd associations...
needed to recode the novel L2 forms into known L1 forms (such as those created when imagining a goat riding in a cab for the Spanish word cabra “goat”). These representations, when accessed using masked priming, yielded patterns that were different from those produced by words that had been learned without the Keyword Method. Based on these and other earlier findings (Kole, 2007; van Hell & Mahn, 1997), Barcroft, Sommers, and Sunderman argued against the use of the Keyword Method as a means of teaching a large amount of vocabulary in a language in which one wishes to become proficient. Instead, they favored a more limited use of the Keyword Method in situations when a novel word form that a person encounters is particularly challenging, such as if someone wants to remember certain words or phrases in an unfamiliar language during a trip.

While demonstrations of the qualitative costs of using the Keyword Method beg caution with regard to using the Keyword Method extensively for L2 vocabulary learning, other techniques for recoding novel L2 forms into more familiar forms can differ when it comes to the qualitative costs they might pose to developing lexicosemantic representations. In one study, for example, Kida (2010) found that having Japanese-speaking learners of L2 English rewrite novel word forms that appeared in a text in Japanese script led to increased learning of those words, especially when compared to having them complete a semantically oriented pleasantness-ratings task. Recoding the novel English word forms into more familiar forms by using Japanese script is a mnemonic technique that differs substantially from the Keyword Method, raising several questions. What are the qualitative costs of recoding novel L2 word forms into different native scripts? Might these costs be less than the costs of recoding novel L2 words via the Keyword Method? If so, perhaps the technique examined by Kida is a more viable mnemonic than the Keyword Method when it comes to the overall goal of increasing L2 word learning.

Three Recommendations From a Lexical Input Processing Perspective

In addition to recommendations to increase exposures, to provide retrieval opportunities, and to enhance the input in which target words appear in effective ways, three other general recommendations can be made when it comes to teaching and learning single words. These three recommendations, which are informed by and consistent with a lexical input processing (lex-IP) approach to vocabulary (Barcroft, 2012, 2015), are to be input-first, processing-specific, and incremental but persistent when teaching L2 words. Each of these three recommendations is discussed briefly below.

Be Input-First

It is important to remember that all language learning begins with input, including vocabulary learning. Naturally, the input provided needs to be meaning-oriented in order for learners to make the type of form-meaning connections that are necessary for vocabulary learning and language learning in general. It is also critical to remember not to overburden learners with tasks during the early stages of word learning, including tasks that involve forced output of a parroting nature without access to meaning, because that can potentially decrease rates of single-word learning.

Be Processing-Specific

It is also important to avoid engaging learners in tasks that can detract from learning desirable aspects of vocabulary knowledge, such as word form and collocation. Semantically elaborative tasks such as sentence writing have been found to decrease L2 single-word
learning substantially, and even more so when the L2 forms are more novel in nature, such as when English speakers attempt to learn single words in L2 Korean as compared to when they attempt to learn single words in L2 French (Wong & Pyun, 2012). For additional information and research on how semantically elaborative tasks can decrease word form learning and how the predictions of the Type of Processing – Resource Allocation (TOPRA) model informs our understanding of vocabulary learning and instructional practices related to vocabulary learning, see a book on lex-IP by Barcroft (2015).

Be Incremental and Persistent

Perhaps the most understated and challenging principle of the input-based incremental (IBI) approach to vocabulary instruction is Principle 8, which is to promote learning L2-specific meanings and usage of vocabulary over time. When it comes to all of the language-specific meanings and usage of words that a language learner/user needs, it is important to recognize the incremental nature of this process while also being persistent. What is needed is to expose learners to rich sources of meaningful input well beyond single words; input that exemplifies and provides the data that learners need to develop this type of knowledge gradually over time.

Beyond Teaching Single Words

While this chapter focuses on teaching and learning single words, in no way is it intended to advocate this type of vocabulary teaching and learning, except for on a limited basis. It is critical not to over-rely on teaching single words in isolation. Vocabulary needs to be taught within larger contexts of meaning-oriented language instruction, including communicative, task-based, and content-focused varieties thereof, and it needs to be taught using input that goes well beyond the level of single words, including sentence-level and discourse-level input and activities that engage learners to process lexically oriented input at these other levels.

Future Directions

Research on single-word learning is intriguing by nature because it is the place at which form meets meaning at a very basic level. As such, it offers a vision of what is essential to language learning while exploring the effects of a variety of possible input-based and task-based manipulations. To date, research suggests that increased exposures to words and some types of input enhancement increase rates of single-word learning, as does providing learners with opportunities for target word retrieval. Future research can continue to explore other input-related variables and concurrent tasks during single-word learning to explore how we can add to the growing list of ways to teach and learn words effectively. Some topics that can be explored in future research include, for example, (1) studies on new ways of enhancing single words in input; (2) studies that examine previously untested predictions of the TOPRA model regarding the impact of different types of semantically, structurally, and mapping-oriented tasks; and (3) studies on the effectiveness of teaching multiple meanings of target words in the context of learning single words in isolation. The findings of new research in these and other areas that involve single-word learning will continue to provide new insights as to how best to teach single words while improving our understanding of vocabulary learning in general.
Key Issues in Teaching Single Words

Further Reading


This book presents input-based incremental (IBI) vocabulary instruction, an evidence-based approach to vocabulary instruction that can be seamlessly integrated within different varieties of meaning-oriented (communicative, task-based, content-based) instruction. Key principles of the IBI approach are grounded in theory and research in lexical input processing.


This book reviews research on the effects of a variety of variables on human memory. Many of these variables, such as those related to repletion, also have implications for learning single words in isolation.


The second edition of this book summarizes and discusses a wide range of issues related to second language vocabulary learning, including topics that are pertinent to learning single words in isolation, such as making use of word frequency when selecting target words.

Related Topics

Factors affecting the learning of single-word items, learning single-word items vs. multiword items, processing single-word and multiword items, strategies for learning single-word items

References


