Incidental Word Learning: Application in the General Education Classroom

An Honors Thesis (HONR 499)

by

Ally Gardner

Thesis Advisor

Dr. Megumi Hamada

Ball State University
Muncie, Indiana

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Abstract

Incidental word learning is a theory that has helped many English language learners (ELLs) and can help many general education learners acquire vocabulary knowledge. It can and has aided in the effort to help learners bridge the gap between languages and concepts in a meaningful way. Every year the number of immigrants entering the United States of America increases and along with it the population of English language learners continues to skyrocket. The United States is only getting more and more diverse, meaning that effective strategies for teaching ELLs are quickly becoming increasingly valuable for public education teachers. An analysis of incidental word learning strategy application uncovers that it can potentially produce favorable results of an increase in the learning of native English-speaking students and ELLs in the classroom. Elementary general education teachers would significantly benefit from utilizing methods that promote incidental word learning.

Acknowledgments

Process Analysis Statement

My thesis project describes the best way for students to learn vocabulary. Students usually are taught vocabulary through instruction that directly explains words by showing them in their written form and then how they are defined. To remember new vocabulary words, it is common for students to complete repetitive activities that are meant to help students memorize words and their matching definitions. This method of teaching and the activities that go along with it lead to intentional word learning. This is when students learn words while being directly taught lessons in order to gain vocabulary. This type of learning is not best for students. My project explains how students should be practicing incidental word learning instead. Incidental word learning is learning words when participating in activities that do not have word learning as their focus. My thesis explains how this type of word learning has proven to help students remember words longer and give them a deeper and more full understanding of what words actually mean within context. My project will provide teachers with information about incidental word learning and suggestions of methods that they can use to increase this beneficial type of learning in their classrooms to help students learn words in a more meaningful way.

Researching and writing my thesis project was a rewarding, difficult, and enlightening experience. I researched tens and tens of articles, journals, textbooks, novels, and websites to learn about my thesis topic. Throughout this process I learned that I have difficulty keeping myself on a schedule when I need to complete a massive task over a long period of time. I learned a lot about focusing when I need to and making sacrifices to complete work in a timely manner. While researching for this thesis I also found out that I learn best when I have collected a lot of different sources about the same topic that all have different perspectives. My view of my

thesis topic definitely changed as my paper progressed as well. When I first started researching, I knew that incidental word learning was something that could help students, but I had no idea just how impactful it could be. As I really got to know the ins and outs of incidental word learning, I only grew stronger in my passion for it to be applied in all classrooms. I kept becoming more and more excited about how students can be their own teachers and learn using the skills they have gained from their instructors. I think that it says a lot that students learn best when they are given freedom to use strategies on their own and take charge of their own learning. Learning about incidental word learning strengthened my belief that students' minds are powerful and that teachers need to give students opportunities to learn naturally.

Incidental Word Learning: Application in the General Education Classroom

Introduction

Incidental word learning accounts for most of students' vocabulary learning throughout their time in school but it is not promoted or utilized as much as it should be. The term describes word learning that occurs but is unplanned. It can come about while participating in a task or activity but it can also occur unintentionally as a result of planned learning. Some examples of activities that promote incidental word learning include extensive reading, group read-alouds, and listening to recorded books that students have chosen themselves. In the English as a second language education community, incidental word learning is a means of acquiring a new language through exposure to words and phrases in informative contexts. Word knowledge and the development of vocabulary are crucial for all learners and especially English language learners (ELLs). ELLs are students whose primary language is not English and have difficulty in reading, writing, speaking, and understanding English, but are working toward improving their proficiency. The development of word knowledge instills crucial foundational knowledge that is needed when acquiring a new language and is important for native English speakers to acquire in order to ensure that they fully understand all of the different aspects of what it means to know a word. All learners must have sufficient word knowledge in order to gain other crucial skills such as learning grammar, reading, writing, listening, and speaking. It is important that all learners acquire a strong base knowledge of vocabulary before learning grammatical concepts and other structural components. Intentional word learning does not provide learners with well-rounded and whole knowledge of words. Incidental word learning is a result of learners interacting with the context surrounding unknown words and using their background knowledge of life and

language to develop explanations of word meaning that are backed up by information from multiples sources. Intentional word learning is missing the context that all words used in the real world are surrounded by. Incidental word learning recognizes, embraces, and utilizes context to broaden word knowledge. Incidental world learning is beneficial for native English speakers and ELLs, and the incorporation of strategies and activities in general education that promote it can lead to significant growth in vocabulary acquisition for all students.

Methods Learners Need

Incidental word learning can be promoted by various teaching methods that help learners interact with and utilize context surrounding unknown words to discover the meaning of new words independently. Teachers should be modeling how to use contextual cues, clues from context, to figure out the meaning of unknown words. Students need to be prepared with strategies that will help them make inferences when faced with unknown words. Educators should show the various steps that learners can take to look that the context surrounding an unknown word, use background knowledge to make connections to the context cues they recognize, and assemble all of their ideas to come to a reasonable conclusion about what a word actually means.

A lot of incidental word learning instruction and methods do not show students exactly how to make inferences that are backed up by specific context cues. Some educators only show students how to identify unknown words by annotating. Circling words that one does not understand, writing questions or question marks next to places of confusion in a passage, and underlining the parts of a passage that show the main idea are all practices that educators model for their students (Singer, 2018). My thesis is going to offer solutions and improvements to the

current methods that are being used by explaining exactly how teachers should be modeling

making inferences using context cues. A step-by-step explanation of how to teach students how

to analyze a text using context cues and implement independent practice will be provided.

Students need to see the connections that can be made from background word knowledge to new

word knowledge. Current incidental word learning teaching is missing direct instruction and

modeling that show students how to use strategies during other language-related tasks

independently that can lead to incidental word learning. Integrating methods and research from

second language acquisition into general education can help teachers provide clear instruction

about how to identify and analyze context cues to acquire word knowledge.

Incidental and Intentional Word Learning

Instead of incidental word learning, direct instruction and other kinds of intentional

learning are often used in American public general education classrooms and are commonly

cited as the strongest influence on the growth of student vocabulary. General education

classrooms are classrooms in which diverse students with and without learning differences are

taught the same or similar material together. In these classes, general education teachers work

with a variety of students who may have special needs, have especially high ability, are ELLs,

have the average learning ability of a child at their grade level, or have any number of unique

characteristics that affect their learning. Although general education instruction often utilizes

strategies that promote intentional learning, many studies have revealed that explicit instruction

in particular words does not have a significant influence on vocabulary acquisition.

Incidental word learning is a powerful yet unrecognized tool that elementary teachers

should be educated about. They should be encouraged to design lessons and use methods that

promote this influential learning style. Research has proven that students' vocabulary acquisition grows most effectively when they read or listen to literature independently with very limited to zero guidance or explanation of vocabulary from their teachers. This lack of support for students is a stark contrast in comparison to the promotion of constant guidance and direct instruction of knowledge that students need to acquire in most American general education classrooms. Trusting that students can learn something most effectively on their own can be a difficult idea to understand. Teachers are often encouraged to carefully and directly provide students with knowledge through the utilization of strategies such as rote memorization in which students are told the correct information and are asked to internalize it through repetition.

The theory of incidental word learning was developed as an alternative to primarily ineffective intentional word-learning strategies such as rote memorization. This theory has been a topic of conversation and used as a common application tool in the second language acquisition community for a while now due to the discovery of its effectiveness in helping English language learners learn vocabulary. Meaning-focused activities and strategies that occur within context are widely used when instructing ELLs due to the idea that learning a new language also means understanding a language with a unique culture surrounding it. English as a second language (ESL) educators understand that language acquisition occurs most effectively when students can experience language in the context in which it would appear in real-life situations.

Many ELLs are not taught by teachers who have training that focuses on second language acquisition though. Most general education teachers are not instructed on how to accommodate ELLs or adjust their strategies to aid them. In the last decade, there has been a massive rise in ELLs in American public schools. The population of ELL public school students in the United

States was 1% higher in 2018 than in 2010 (NCES, 2021). This translates to a half a million student increase in the American public school ELL population. In the fall of 2018, the ELL population in public schools increased by 10% or more in 10 states. If public school educators were provided with the tools, knowledge, and strategies to improve ELL's learning, it could have a large impact on the ever-growing diverse student population. Educating teachers on instructional strategies related to enhancing the possibility of incidental word learning is a huge step in the right direction and it is important that this information is spread to as many teachers as possible.

Second Language Acquisition

SLA Theories

There are numerous second language acquisition theories that can influence the way that ESL and general education instructors teach vocabulary and specifically support incidental word learning. The theories of explicit and implicit learning have been utilized and discussed among second language education researchers and educators for many years. Incidental word learning is directly related to implicit learning, which is learning that occurs "without conscious attention or awareness" (Brown, 2014). Intentional word learning is closely connected to explicit learning, which is learning that includes intention and conscious awareness. Both explicit and implicit learning theory address the importance of the role of attention in word learning. Focal and peripheral attention are crucial to language acquisition according to these theories. Peripheral attention is a key component of incidental word learning and implicit learning. This type of attention is made up of two domains: representational formats and sensory systems. Representational formats can be spatial information, visual object features, and auditory object

features such as individual phonemes or the pitch of a tone (Tamber-Rosenau, 2016). Sensory

systems include the visual, auditory, and modality systems that can bring about representational

formats. Incidental word learning and implicit learning also produce mostly unanalyzed

knowledge, which is learned information that has been acquired without understanding the

structure or rules surrounding it.

The three most influential second language learning theories are behaviorism,

cognitivism, and constructivism. Behaviorism promotes the idea that humans just need to learn a

new set of habits to acquire a new language. Structural drills and repetition are often promoted in

behaviorism, along with rote memorization of language rules and vocabulary. Behaviorism

promotes the idea that a certain situation, or stimulus, will elicit a specific response. This theory

claims that humans need to learn a new set of habits to acquire a new language. Behaviorism

emphasizes the importance of accurate performance to a high degree and many supporters of

behaviorism believe that when learners make mistakes that they are not learning. When

behaviorism was first being formed, language acquisition and psychology experts such as

Charles Osgood and B.F. Skinner thought that the scientific method should be applied to

language because abstract things like ideas were not real responses that could be accurately or

precisely measured.

In the 1950s, a theoretical linguist named Noam Chomsky revolutionized the way that

people thought about language acquisition with a fresh perspective called cognitivism.

Cognitivism claims that children do not learn a language simply through imitation or repetition,

which is an idea that behaviorism promotes. Supporters of this learning theory believe that

nonobservable aspects of language learning like meaning, thoughts, and understanding are

important in developing linguistic performance (Brown, 2014). A foundational belief of cognitivism is that kids have an innate ability to master the rules of a language and internalize them. For example, children may display this by using phrases such as "the toy breaked" or "she goed," in conversation because they are showing obvious knowledge of English language rules by applying them in ways that they have never heard others do so before. Cognitivists state that human brains are designed so that knowledge of grammar is included genetically, even before verbal language has been developed.

The theory of constructivism emphasizes the discovery and development of meaning and ideas when learning a language. There are two main branches of constructivism: cognitive and social. Cognitive constructivism promotes the idea that children should individually work to make information their own and develop their learning through the usage of their prior experiences. Social constructivism supports the importance of social interaction in language learning (Brown, 2014). Supporters of this form of constructivism advocate for the idea that children's social interactions with their peers and their environment aid in the development of their language. The idea of a learner's zone of proximal development is also a key component of social constructivism. A learner's zone of proximal development is the space between their current and potential language development. It includes concepts that they have not learned yet but will be able to learn with the aid of knowledgeable instructors or peers. Meaningful learning and the promotion of student creativity are crucial to the foundational ideas of constructivism. Incidental word learning is most strongly supported by constructivist theory, which includes the natural discovery of vocabulary and language information through individual and group learning in different contexts.

Second Language Teaching Methods

There are numerous teaching methods and approaches that second language educators use. Some of the most popular approaches that second language educators have used are the grammar-translation method and the direct method. These methods were developed and at the height of their popularity before the beginning of the twentieth century but they are still widely used in many countries to this day. The grammar-translation method includes the utilization of the students' first languages with limited usage of the targeted second language. This method of language teaching focuses on word forms and inflections. A common activity that students may do is to translate sentences to and from the target language. Practicing this method has most often led to a massive lack in students' ability to communicate in their target language. The direct method involves no usage of the students' native language. The teacher only needs to know the target second language but also must have native-like proficiency (Celce-Murcia, 2014). This method includes lessons in which grammar and culture are taught inductively. Teachers who use the direct method often design lessons that incorporate a lot of conversation, movement, and images to develop meaning in the target language.

The twentieth century brought about several new second language teaching methods such as the reading approach, the audiolingual approach, and the oral-situational approach. The reading approach has a strong emphasis on teaching language in order to achieve optimal reading comprehension above all other skills. Grammar and vocabulary are taught specifically to enhance reading comprehension in the second language. This method also promotes the usage of direct translation between languages. The students' native language is used as a tool for reading, explaining, and discussing reading material. The audiolingual approach is much different and is

characterized by a focus on speaking and listening to the target language. Those who use this approach usually are teaching this way under the assumption that the development of habits is equivalent to the learning of a language. This means that language imitation and memorization are promoted and utilized when teaching. The audiolingual approach involves instructors actively working toward stopping learner errors from occurring and viewing errors as something negative. The oral-situational approach was created in response to the reading approach's lack of focus on speaking and listening skills. This method involves only the usage of the second language in the classrooms and like the audiolingual approach, language material is practiced verbally before focusing on reading and writing skills. Vocabulary and grammar in the second language are presented in the form of a situation such as being at the grocery store or at the park.

Some of the most recently developed and currently popular second language teaching methods are the cognitive approach, the affective-humanistic approach, and the communicative approach. The cognitive approach most often focuses on individualized instruction in which learners are in charge of their learning (Celce-Murcia, 2014). It is very different from the previously mentioned approaches. The cognitive approach views learning a language as the acquisition of rules and not the development of habits, as it is viewed by when practicing the audiolingual approach. Grammar instruction is flexible in that it can be presented in the form of introducing grammar rules and then practicing or rules can be highlighted later on, possibly not directly at all. This is different from the direct method in which grammar and vocabulary are taught exclusively in an inductive way. When using the cognitive approach, pronunciation is not emphasized as it is when using the audiolingual approach. Mistakes and errors are welcomed and seen as valuable data that may aid in future learning through the form of feedback or correction,

which is also the opposite of the audiolingual approach. Vocabulary learning is crucial to this

approach. The cognitive approach could be used effectively alongside the promotion of

incidental word learning. The affective-humanistic approach could also incorporate incidental

word learning. This method involves the language teacher seeing the classroom environment and

atmosphere as more crucial to the language-learning process than materials or strategies.

Meaningful interaction and aid from classmates are viewed as important for language

development which leads to this method including a lot of partner and group work. The

communicative approach could be used very effectively to promote incidental word learning.

This method involves second language instruction in the form of "authentic tasks and projects

presented and practiced using segments of preexisting meaningful discourse" (Celce-Murcia,

2014). Language material is often presented in numerous social contexts in which students can

naturally use and acquire vocabulary and grammatical information. The four main language

skills: writing, reading, speaking, and listening are utilized consistently throughout lesson

activities when using the communicative approach.

<div align="center">**Word Knowledge**</div>

The Meaning of Knowing a Word

Word knowledge is one of the most, if not the most, important parts of a person's

understanding of a language. The idea of knowing a word is a relatively complex concept and is

characterized by several different aspects. There are three main components of vocabulary

knowledge: form, meaning, and use. Each of these parts of word knowledge is crucial to a first or

second language learner's understanding of a language's vocabulary. Knowledge of form,

meaning, and use is best acquired through the promotion of specific kinds of learning and

activities. The acquisition of these types of word knowledge occurs as a result of receptive and productive vocabulary use. Receptive and productive vocabulary are learned and used throughout the learning of each aspect of word knowledge. The two types of vocabulary are also sometimes referred to as passive and active vocabulary respectively. Receptive vocabulary describes words that a learner understands while listening or reading. Productive vocabulary includes words that a learner is able to meaningfully produce through speaking or writing. Both kinds of vocabulary can be practiced and acquired while learners are developing their understanding of form, meaning, and use.

For successful acquisition of vocabulary knowledge, it is crucial that a learner is well-informed of the different forms that words can take and the meanings of each of those forms. Knowing a word means understanding its spoken and written forms. It is also important for learners to know about the various parts of a word that work together to convey meaning. Understanding a word's spoken form means that a learner can use their receptive skills to identify the word when they hear it and use their productive skills to produce the word with accurate meaning. It also means having the knowledge of how to pronounce sounds in words correctly, including the appropriate stressing of multi-syllable word sounds. Understanding a word's written form means the ability to spell, write, and read words. Spelling is one of the most important aspects of understanding a word's written form and one's ability to spell conveys a lot about one's vocabulary and language knowledge. Making connections between specific letters or letter groupings in words and the sounds of a word using knowledge of common language occurrences has proven to strengthen spelling ability (I.S.P. Nation, 2001). The development of knowledge of the written and spoken forms of words are closely tied together and the receptive

and productive skills that learners acquire in relation to each form can be applied to multiple language-learning areas. A learner's writing ability can strongly influence their ability to accurately produce phonological representations of words and vice versa.

An important aspect of understanding a word's spoken and written form is knowledge and comprehension of word parts. Understanding vocabulary stems and affixes are crucial to knowing words. Stems or roots are words that can stand alone and do not include any affixes. Affixes are prefixes or suffixes that can be attached to stems that add or change the meaning of words. Along with the knowledge of stems and affixes, understanding of phonemes, graphemes, and morphemes, even if a learner is unaware of these specific terms for the concepts, is extremely important for one to fully know the words of a language. A phoneme is the smallest unit of sound in a word. For example there are three phonemes in the word dog: /d/, /o/, and /g/. Most of the time, phonemes can be represented by only one letter, but sometimes they can be represented by multiple letters. Phonemic awareness, which is being able to hear word sounds and change sounds in words to make different words, is a crucial skill that language educators strive for learners to acquire. A grapheme is the smallest unit of written language and is usually described as the written representation of a phoneme. For example, the grapheme in the word "cat" that is represented by the phoneme /t/ is the letter t. A morpheme is the smallest unit of meaning in a word that cannot be separated further. An example of a morpheme is the word "blue." It cannot be divided into any other word parts. Morphemes in the word "deadly" would be "dead" and "ly."

It is just as important for learners to understand the meaning of a word as it is to understand its written and spoken form. Making a connection between a word's form and

meaning is critical. Knowing just a word's form and not its meaning can lead to a lack of ability to remember or utilize the word readily. Teachers should develop students' ability to retrieve knowledge of a word's form and meaning together often so that they may form a strong connection between the two. An excellent way to make these connections and strengthen them when working with second language learners is to highlight similarities between terms in their first language and their target language. It is also necessary for learners to understand that some words have multiple meanings. For example, the word "book" can refer to an object with pages covered in words that people read or it can refer to the reservation of something. Words like this are called homonyms and learners should understand how to uncover a word's meaning using context. One of the most important concepts that learners should understand when they know a word is the parts of speech that words can be categorized into. The primary parts of speech in the English language include nouns, adjectives, and verbs. Learners need to know why words belong to a certain part of speech group and how they are related to the other words that belong to their speech group.

Knowing a word's form and meaning is necessary to get to the point in which a learner can use a word accurately and effectively. Being able to use a word with its form and meaning produced and conveyed correctly displays an overall knowledge of a word. Part of knowing a word is also understanding when, where, and how often it should be used. Inappropriate usage of words can lead to misunderstandings and confusion when using words to communicate ideas to other speakers of the target language. The English language does not have very strict word usage constraints in comparison to other languages such as Korean which are very particular about the words that are used when referring to specific people or in certain situations. Understanding

collocations, or the consistent occurrence of several words being used together, significantly

contributes to one's understanding of a word as well. An example would be the words "pay" and

"attention" being used together often. When acquiring knowledge of how to use words, one of

the most important things to recognize and take note of is patterns. This includes grammatical

patterns, words that are consistently paired together, words that are associated with each other,

and any other usage patterns that occur (I.S.P. Nation, 2001).

Academic and Communicative Vocabulary

In order to learn a language, one should develop their knowledge of academic and

communicative vocabulary. The development of basic interpersonal communication skills

(BICS) and cognitive academic language proficiency (CALP) are both extremely important for

language learners. Communicative vocabulary is language that one uses or is faced with that

allows one to convey meaning to another person or group. It can be used outside of an academic

setting or within one if it is appropriate. BICS refers to a language speaker's conversational

fluency, which usually only takes around one to two years to develop (Wright, 2015). Academic

vocabulary is language that is often used in an academic setting in written and spoken formats. It

is uncommon for it to be used outside of a school setting, unlike communicative vocabulary.

CALP describes a learner's ability to use academic language to describe ideas that aid in

academic success. English academic proficiency usually takes five years or more to develop.

There is an ongoing debate surrounding whether communicative or academic language has a

stronger influence on overall literacy. Linguists such as Kellie Rolstad and Terrence Wiley argue

that instead of focusing specifically on academic language, educators should focus on the

communicative functions of language and how to use language in different contexts.

There are many learners who struggle with developing academic and communicative vocabulary for various reasons depending on their background knowledge, native language, and personal learning characteristics. When learning English, learners most often struggle the most with sociolinguistics and pragmatics. Every language has its own set of rules regarding how context contributes to a word's meaning and how words should be used in different social settings. These aspects of vocabulary knowledge are difficult for many ELLs to fully acquire due to a need for a deep understanding of the culture surrounding the language. Spelling and pronunciation are some other parts of vocabulary development that a large number of learners struggle with. Many English words can have multiple spellings depending on their meaning and the context they occur in. Spelling and pronunciation do not always have a consistent correlation in English. There are only 26 letters in the English alphabet, but there are 44 speech sounds. There are also a lot of exceptions to rules in spelling, pronunciation, and grammar. In many other languages, words are pronounced as they are written.

Intentional Vocabulary Learning and Teaching Methods

Repetition and Definitions

Educators who teach students English as a native language and a new language use both incidental and intentional word learning methods. Incidental word learning can be explained as vocabulary development that occurs without the intention of learning new words. This learning can happen with the intention of learning something else (Ahmad, 2012). Intentional word learning can be defined as word learning that occurs with the learner knowing what they are going to learn and their attention during learning tasks is focused directly on learning vocabulary. Some common methods that teachers use to promote intentional learning are note-taking, usage

of flashcards, and translation with dictionaries. Note-taking is one of the most popular intentional word learning methods that can be used with students learning English as a first or new language. Using this strategy, the instructor could say the word verbally, have the students repeat it, say the part of speech, and then define it. The students would be given a note-taking organizer in which they would fill in details about the word while instruction is occurring. The students would write the vocabulary word multiple times in blanks in sentence frames.

Repetition is common in intentional word learning strategies. Another vocabulary learning strategy that includes repetition is the continuous writing method in which learners are assigned a specific amount of time to write particular words or about particular words in a massive quantity (I.S.P. Nation, 2001). Many general education teachers who are working with native English speakers use this method as well and commonly refer to it as a "quick write."Another strategy that encourages repetition is the usage of word cards. This simply means the utilization of vocabulary cards with a vocabulary word in the target language on one side and then on the other side there is a translation of the term in the learner's first language. It is also common for the cards to have the vocabulary term in the target language on one side and then the definition on the other. Students could practice learning vocabulary with these cards independently, with a partner, or with a teacher. Native English speakers also use the notecard method often when they are working toward acquiring vocabulary quickly and efficiently. Another commonly used intentional vocabulary learning method for ELLs is translation using bilingual dictionaries. Learners are given a list of particular vocabulary words in English to translate to their native language or they are given words in their first language that they are asked to translate to English.

There are several speaking and listening intentional word learning techniques that second language educators use in order to improve vocabulary. A speaking and listening method language learners could use would be learners recording themselves saying a word, listening back to it, taking notes about how they could do better on their pronunciation, and then continuing to re-record themselves until they get it right. Another method could be an instructor saying vocabulary words and asking learners to listen and write down the word that they said. The students can use their dictionaries if they need help with spelling. Speaking and listening activities are not very common when students are learning English as a first or new language but studies show that practicing language through speaking, listening, writing, and reading are all very important to developing fluency.

Decontextualization and Word Parts

General education classroom teachers use many different methods and strategies to promote intentional word learning for students who are learning English as a first language. Many intentional learning methods that are practiced in a general education classroom focus on somewhat decontextualized vocabulary learning. These methods often emphasize spelling, grammar, pronunciation, and linguistic rules. The usage of word lists is very common in general education classrooms when educators are aiming to intentionally develop students' vocabularies. Word lists are often created by a classroom's teacher in order to place a focus on the acquisition of a specific set of vocabulary terms. Word lists are not uncommon in English as a second language learning communities either. They can be used to structure countless word-learning activities that work for all students.

Students participate in intentional vocabulary learning tasks that incorporate words for word lists such as completing word searches, crossword puzzles, repeatedly writing vocabulary, and writing definitions (Karami & Bowles, 2019). A widely used method is having first language learners keep a vocabulary notebook in which they will write each of their vocabulary words from their lists, use dictionaries to find their definitions, and then copy the words' definitions. This is similar to how students who are learning English as a new language use bilingual dictionaries to translate and define English words. Crossword puzzles are used to develop vocabulary by allowing learners to practice spelling, connect definitions to written representations of words, and see relations between vocabulary words through a visual display of shared individual letters. Word searches also show relationships between the spelling of words but they are criticized for their lack of connection to word meaning and context. Vocabulary cards are also used to teach native speakers of a language as often as they are for second language learners.

Many educators focus on the recognition of and analysis of word parts when encouraging vocabulary acquisition. These word parts include root words and affixes such as prefixes and suffixes. For example, if a student was learning the word "improperly", the teacher would explain that the prefix "im-" means "not", the suffix "-ly" means "like", and then also define the root word "proper." This method helps learners work toward being able to break down the meaning of unknown and known words by recognizing the meaning of different word parts. This method is used in second language teaching as well and can be emphasized a lot depending on the level of similarity in the word parts or structure of learners' native language's words in comparison to English. Some educators believe that going in-depth when explaining the

difference between word parts in the learners' native language and English is important for their learning foundation.

Making connections between words is important to many general education teachers and some encourage students to make these connections and develop vocabulary through the method of categorization. As a word-learning strategy, categorization can be practiced in several different forms. Teachers may prompt students to list all of the words that they can think of within a set time frame and then ask them to place the words they listed into categories (Readence & Searfoss, 1980). This can also include adding more words to each category that they identify. Educators may also present a word and ask students to produce other words that they associate with it. After this, learners could put the associated words into categories that display characteristics of the original words and connections between all of the terms. Teaching learners how to make connections between words that they know and words that they may know in the future is important because these strategies that they learn can help lead students down the path of incidental word learning. This also directly connects to how students who are learning English as a new language are often taught to make connections between words in their native language to English words.

Incidental Word Learning Theory

How the Theory Works

Incidental word learning theory explains how most of language learners' vocabulary acquisition occurs through indirect exposure to words. It is widely believed in the English as a second language education community that learning that is connected very closely to context is the most valuable and meaningful. Many intentional word learning strategies lack in their

inclusion of context-rich activities and instruction that aid in the long-term development of learners' complete understanding of the meaning of vocabulary terms. Incidental word learning allows students to develop their own learning and form more personal connections to words. Studies have shown that incidental word learning fosters more in-depth mental processing and increases retention (Ahmad, 2012). Observing and analyzing words within context by thinking deeply about their possible meaning involves cognitive processing that strengthens learners' abilities to remember vocabulary.

The key idea with incidental word learning is that the vocabulary acquisition that occurs is not the focus of the learner or the learning task that they are completing. Some researchers believe that incidental word learning can occur when teachers discuss the possible focus of learner attention on words. Educators could also choose to design an activity so that incidental word learning potentially results from it. Just because the learning of words is incidental does not mean that the learner does not notice the words at all (Gass, 1999). When reading a passage, it often means that the learner's focus is on comprehending the content or meaning of the whole section while vocabulary learning happens without acknowledgment.

There are several reasons why incidental word learning occurs and the causes of the learning vary depending on the learner. Background knowledge and previous experiences with language are massive influences on the possibility of incidental word learning occurring. A learner's native language also has a large effect on their incidental word learning. If a learner sees a word in an English text that they recognize as a cognate in their native language then they are much more likely to unintentionally acquire knowledge of the term. Cognates are words that have common sources or origins. An example of a cognate that exists in Spanish and Italian is

the word "importante" which has the same origin as the English word "important." If a student's first language is Italian or Spanish and they are reading an English passage with the word "important," then there is a high possibility of incidental word learning of the English term.

Another more clear influence on the probability of incidental word learning occurring is exposure or knowledge of English. Students are also more likely to learn a word unintentionally if they know several words that are related to the unknown English word, whether that relationship is through similar word parts or through subject matter. Incidental word learning can also vary depending on the inference strategies that learners use and when they use them while reading. A successful strategy learners can use includes filtering out irrelevant information from relevant information, identifying the gap in relevant information, and then figuring out how to fill the gap in relevant information (Hu & Nassaji, 2014). Learners may be unsuccessful if they focus on form whenever they do not have a sufficient amount of base word knowledge or if they do not search for clues in the surrounding context. Studies show that the most widely-used and successful strategy that learners have used when they encounter unknown words is inferencing, which is the key to incidental word learning (Paribakht & Wesche, 1999).

Retention of Incidental Word Learning

A number of studies have been conducted investigating the effectiveness of incidental word learning, especially in comparison to the effectiveness of intentional word learning. A study published in the Australian Journal of Teacher Education sought to compare intentional vocabulary learning, incidental vocabulary learning, and a mixture of the two types of learning to discover which word learning strategy best promoted retention. The study was conducted by Amirreza Karami and Freddie Bowles who are researchers at the University of Arkansas.

Participants in the study consisted of 78 Iranian English language learners from ages 12 to 17. All of these participants were being taught at the same vocabulary level with the same English language teaching textbook: Touchstone 2B. Their native and second languages, Azeri and Farsi, were the exact same. The students were split into six groups of thirteen, with three groups being assigned as the control group without any vocabulary instruction, one group (group one) being assigned to receive instruction that promotes incidental word learning, one group (group two) being assigned to receive instruction that promotes intentional word learning, and one group (group three) being assigned to receive incidental and intentional word learning instruction.

All of the participants were given a pre-test focused on testing knowledge of 40 vocabulary words of varying parts of speech that were from the textbook that the students were all familiar with. Each of the three experimental groups, along with their assigned control groups, was given tests with formats that matched their instruction type. The experimental groups were then given eight instructional sessions by an ESL instructor in which they were taught the 40 words using strategies that matched their target word learning type. Group one was presented intentional word-learning strategies such as translating and defining words, group two was presented with incidental word learning strategies such as reading meaningful texts and conversation, and group three was taught with a mixture of both strategies (Karami & Bowles, 2019).

The students were given an immediate post-test and a delayed post-test after these instructional sessions with a slight change in question order and format from the pre-tests that revealed that incidental word learning strategies are substantially more effective than intentional word learning strategies. The delayed post-test was administered to test vocabulary retention

over time. The average scores of the participants who received incidental word learning instruction were around four points higher than those with intentional word learning instruction on the immediate post-test and about six points higher on the delayed post-test. The delayed post-test results clearly display that incidental word learning promotes higher retention rates than intentional word learning. The intentional word learning group's average score dropped around four points from the immediate to delayed post-test while the incidental word learning group's average score only dropped two points. It is worth noting though that the group that performed the best on both tests was the group that received both incidental and intentional word learning instruction. This suggests that optimal word learning may occur with a combination of incidental and intentional word learning but with an emphasis on incidental word learning.

Another study conducted at the University of Illinois at Chicago investigated the effects of incidental word learning and reading on retention as well. This study specifically focused on observing how exposure frequency affected retention and incidental word learning. 95 German language learners at the University of Illinois at Chicago were asked to read six paragraphs that focused on twelve target words and then were given two types of word tests, a recognition test and a production test (Rott, 1999). The tests were administered three times: right after reading the paragraphs, after a week, and then a month later. Groups of learners were each exposed to the target words in different frequencies. Different learners were exposed to the target words zero times, two times, four times, and six times. Results of the study showed that the learners that were exposed to the words six times had a much higher productive word knowledge gain and retention than the other learners who received less exposure. Participants who experienced the

most word exposure also had significantly higher percentages of words learned incidentally, even a month after reading the paragraphs.

A similar study also aimed to explore how frequency and distribution of word occurrence affect incidental word learning but came to a different conclusion. In this study, 61 Taiwanese ELLs read and listened to a graded reader, a generally low difficulty level book for foreign language learners, in class once a week for 13 weeks. The ELLs were given a bilingual matching pre-test before reading, a post-test, and a delayed post-test that each focused on measuring word learning of 100 target words that were included in the book. After the first post-test, there was a 5-week break, seven weeks of classes in which the ELLs listened to three more graded readers, and then the delayed post-test was administered. The study concluded that word frequency and distribution of occurrence did not significantly contribute to incidental word learning (Chang & Webb, 2015) Researchers involved in the study suggested that it may be due to other word learning factors being more important to the process. A different study that was conducted with 12 Korean ELLs and focused on testing incidental word learning of a wider variety of word classes concluded that nouns, verbs, and adjectives were more easily acquired when they were more frequently presented within context (Kim & Kweon, 2008). When tested, these ELLs also displayed evidence that nouns are easier for learners to retain than adjectives or verbs. While there are some exceptions, it can be stated that most studies show that the frequency of words contributes positively to incidental word learning. The one fact that has been consistently proven in each of the studies is that reading and listening to words within context result in substantial incidental word knowledge growth and retention.

Pedagogical Approaches in Incidental Word Learning

Incidental Word Learning Strategies

There are multiple strategies that learners can use when they encounter unknown words or phrases that can lead to successful incidental word learning. The most effective strategy that learners use when acquiring word knowledge incidentally is inferring word meaning from context. Learners can make inferences that lead to incidental word learning using multiple sources such as knowledge about word meaning, syntax, morphology, punctuation, grammar, and even knowledge of the world (Paribakht & Wesche, 1999). For example, if a learner encounters a new word they may recognize the definition of several other words used with the unknown word in a conversation or in a text and be able to fill in the meaning of the new word using this information. This ties into how some learners may use their knowledge of English syntax to infer word meaning within context. A learner using this strategy may use their sentence-level grammatical knowledge to figure out that the word they do not know must be a verb because the sentence they are viewing is missing an action word. Syntactic inferences are easier and more common for ELLs to make if their native language follows a similar word order structure to English. This type of inferencing is most commonly used by more advanced learners. Some learners may use their semantic and syntactic knowledge together in order to infer a word's meaning, which has shown to produce incidental word learning with long-term retention due to the complex cognitive processing that occurs. Learners often combine their academic knowledge of words with their knowledge of the world whenever they are making inferences with a piece of text or in a conversation because personal experiences with language build the strongest and most meaningful connections.

Studies have shown that there are eight different kinds of contextual cues that learners can use to make inferences from context: temporal, spatial, value, stative descriptive, functional descriptive, casual/enablement, class membership, and equivalence cues. Contextual cues can be described as clues that can be found in a text that can help and sometimes hinder learners when working toward figuring out an unknown word's meaning (Powell & Sternberg, 1983) Temporal cues are clues from the frequency of an unknown word. Spatial cues refer to hints that can be observed from an unknown word's location. Value cues are clues about the effect or worth of the word. Stative descriptive cues refer to hints about an unknown word's physical characteristics while functional descriptive cues refer to clues about an unknown word's potential actions or uses. Casual/enablement cues are clues about an unknown word's enabling conditions. Class membership cues are hints about the word class or classes that an unknown word might belong to. Equivalence cues refer to hints about what an unknown word means or hints that are contrastive to an unknown word's meaning.

   Learners' abilities to utilize these cues when presented information in a verbal or written context vary due to students' differing skill sets regarding identifying, understanding, and analyzing contextual elements. There are stages that are important for learners to go through to use information they have learned from context clues to acquire word knowledge. Learners can begin by using selective encoding, which means searching through unimportant or irrelevant information in a text or conversation to find information that is important or relevant to find meaning. Students can then utilize selective combination, which means putting together all of the information that they have gathered from practicing selective encoding to form a whole idea. One of the most crucial parts of the process that learners must go through is selective

comparison, which involves learners connecting the new information they have learned to background knowledge (Powell & Sternberg, 1983).

The effectiveness of learners' use of morphological awareness is often overlooked when considering how students make accurate inferences when practicing incidental word learning. Studies have shown that morphological awareness is a more reliable predictor of a learner's future comprehension and reading achievement than phonological awareness which is associated with high improvement in reading practices (McCutchen & Logan, 2011). Morphological awareness is understanding the different morphemes or meaningful word parts and how words can be taken apart and built using morphemes. Phonological awareness is understanding the various sounds in spoken language by being able to recognize sound patterns, rhymes, syllables, and other components. A learner could use the strategy of making inferences while reading using morphological awareness when they encounter any unknown word. For example, if a learner came upon the word "unthinkable," they may be able to use morphological knowledge to break down the different word part meanings and put them together to discover the full meaning of the unknown word. The learner may think that "un-" is a prefix that means "not," "think" is a root word or stem that means "to have thoughts or beliefs," and "-able" is a suffix that means "to be able to." After breaking down this word the learner may be able to conclude that "unthinkable" could mean "not able to have thoughts or beliefs about," which is generally very accurate. Using morphological awareness when making inferences is often effective when acquiring vocabulary incidentally long-term because knowledge of different morphemes and word parts builds over time and can be applied over and over again in different contexts.

Learners use other strategies that are not as common to figure out the meaning of unknown words while completing tasks. Some students may use the retrieval strategy, which can be described as repeating the word verbally or reading it multiple times in their heads. Practicing this can lead learners to eventually retrieve word knowledge due to help from phonetic or graphic cues (Paribakht & Wesche, 1999). Another strategy that learners may use is asking teachers or peers for help when they do not understand a word. Asking for assistance can take many different forms. Incidental word learning may occur if a learner encounters an unknown word and they ask a question such as, "How do you pronounce this?" The peer or teacher they are asking can provide this information, which may give the learner enough information to an make inference about the unknown word using other contextual clues. Learners also may know an unknown word in its written form but not its spoken form or vice versa.

Tasks and Methods

There are a number of beneficial methods that teachers can use that often result in incidental word learning for their students. The most commonly used and effective strategy that promotes incidental word learning is extensive reading. Extensive reading is allowing learners to read a lot of books or several longer books that are not very difficult and are enjoyable for them (Ahmed, 2012). The goal of extensive reading is for students to choose books that they want to read and to have the students read as much as they can. It promotes incidental word learning because the focus is on understanding the content of the story, building speed, and developing fluency but not on learning specific vocabulary. Learning that occurs during extensive reading is completely student-driven because they choose their own books and read independently. Several studies have cited increased motivation to learn a new language and reading confidence for ELLs

and native English speakers are much more likely to adopt reading as a hobby outside of school after practicing extensive reading. Incidental word learning occurs often when learners are practicing extensive reading due to factors such as the books students are using being at their reading level, which makes it more likely for students to be able to make accurate inferences about unknown word meanings.

A teacher could increase the possibility of incidental word learning occurring by assigning weekly reading logs. The reading logs are similar to extensive reading in the classroom because they encourage higher volumes of reading and allow students to choose books that they would prefer to read. The only difference would be that learners would be reading outside of a school setting and be wholly responsible for their own learning. Students could be given a specific number of books to read or a certain amount of time they must read by the end of the week which would provide many different opportunities for them to practice incidental word learning independently. Teachers should also encourage learners to reread books that they are recording on their reading logs because they may have ignored words that they did not know during the first read and it will give them another opportunity to experience incidental word learning. It may also give learners a chance to reread books that they have already practiced incidental word learning with, which will allow them to reinforce the new word knowledge that they have acquired and increase retention.

Listening to books and stories is another very effective method that teachers may use that promotes incidental word learning. Providing auditory context is a great way for learners to acquire vocabulary incidentally because many of their interactions with language outside of school have been and will be auditory and verbal. Teachers should be reading to their learners as

often as possible. To promote incidental learning, students' only responsibilities during the

reading should be to listen, enjoy, and absorb the content of the story. To properly execute this

strategy teachers, should allow learners to choose the story that is going to be read or the

instructor could choose a story that they know discusses a topic that their students are familiar

with or are interested in (I.S.P. Nation, 2001). Ensuring that the stories that are being read

provide sufficient context and are at a level very similar to the learners' reading level is crucial.

Students can also practice listening to books on their tablets through apps or on YouTube.

Learners can listen to stories by using the Epic app which displays the text on the tablet and

while reading a story to the student. This app provides students with access to a massive variety

of books so that all learners can choose a story that interests them. Learners are also able to

absorb written and verbal context that could cultivate incidental word learning.

In order for students to use strategies that can lead to incidental word learning, teachers

can model and provide instruction that displays what strategies can be used, how, and when. This

teaching would occur separately from any task that incidental word learning would occur and

involve encouragement for students to use strategies to figure out what words are if they do not

know them. Even if learners are aware that they are using a strategy to understand a word, the

learning that occurs is still incidental as long as the goal of an activity is not to acquire

vocabulary. There will always be at least a tiny bit of intention and attention that is present when

making an inference about an unknown word's meaning. When learners are made aware of

strategies that they can use such as morphological analysis or inferences using syntax

knowledge, they are much more likely to implement these methods consciously or unconsciously

when performing tasks that are unrelated to vocabulary acquisition which may lead to incidental

word learning. Teachers may even use the method of modeling how to identify unknown words without directly calling attention to the strategy they are using. Learners could acquire the knowledge of how to apply word learning strategies incidentally this way.

Incidental word learning instruction can be conducted in a variety of ways depending on the teacher and the learning goals they have set for their students. Below is an example paragraph that a teacher could use to discuss and model analyzing linguistic and contextual cues to the figure out word meanings to promote incidental word learning:

"Emily and Tina had a fun time at the carnival. Tina played a game at the carnival and won a giant stuffed unicorn as a prize. She cheered and jumped excitedly into Emily's arms. Both of the girls had never won anything before, so they had never been happier. They were so happy that they decided they needed a treat. Tina turned and saw popcorn popping in a machine at a nearby booth. Perfect! Emily and Tina celebrated by eating salty, yellow popcorn from a food stand. The popcorn left their hands covered in butter, but it was delicious!"

A teacher could begin by explaining the goal of the lesson, which would be to understand different ways that readers can uncover the meaning of words that they do not know. First, the teacher should present the paragraph that they will be reading and analyzing. Then the instructor could read the passage aloud and pause at a couple of words that they "do not know the meaning of." The teacher should acknowledge that they do not know the meaning of the words but they are going to underline them and come back to them later because to figure out what unknown words are, one has to get the full picture first. Some examples of words that some learners may not know when listening to or reading the passage would be "excitedly" or "popcorn." The instructor will bring their attention back to the unknown words and explain that there are a ton of

different clues that they can use within the word and in the words and sentences surrounding it. It would be best to bring up that everyone uses different strategies that work best for them whenever they are searching for clues to understand a new word.

The teacher would identify and explain multiple ways that a learner could uncover the meaning of the word "excitedly." The instructor could first point out linguistic clues that could be used. They could explain how the different parts of the word gives them clues. The teacher could state that they know "excite" is a root word and a verb that means to "cause strong happy or enthusiastic feelings" while "-ly" is a suffix that means "like" or "a characteristic of." Putting those meanings together can form a whole meaning for the word "excitedly," which means "to complete an action in an enthusiastic or happy way." The teacher could also explain a class membership cue that they noticed. The verb "jumped" is before the word "excitedly." "Excitedly" is also being used to describe the verbs "cheered" and "jumped." The teacher could explain that they know that adverbs are used to describe verbs, adjectives, or other adverbs, so they know that it is very likely that "excitedly" is an adverb.

The teacher could then turn their attention to the unknown word "popcorn." First, they could identify stative descriptive cues in the passage that tell them about the word's physical characteristics. "Popcorn" is described as salty and yellow. The word salty is usually used to describe food so popcorn is very likely a food. Then the teacher could describe how they are now thinking about foods that are yellow. The teacher could identify phrases that provide spatial cues such as "at the carnival and "in a machine at a nearby booth." This tells readers that this word is something that can be found at a carnival in machine at a booth. All of these cues together could help someone understand the meaning of the word "popcorn." The teacher could ask their

students if they know of any salty and yellow foods that could be found in a machine at a booth. The students or the teacher could share experiences of them eating popcorn at a carnival and connect their new word knowledge to real-life experiences.

The word "popping" also gives a functional descriptive cue that describes an action that "popcorn" can perform. The teacher could explain that there is only one thing that pops that makes sense in this context. The fact that "popcorn" is a thing and can perform and action means that it is also a noun. This conclusion could come from class membership cues. The word "delicious" provides a value cue because it describes the effect and desirability of the "popcorn." The teacher could explain all of these different cues and describe how they all work together to inform the meaning of the unknown word. For more practice, the teacher could give the students another passage and ask them to underline any words that they do not know. They would then be expected to practice what the teacher modeled by analyzing the paragraph and looking for cues by themselves or with a partner to figure out the meaning of any unknown words.

After modeling how to analyze a paragraph using context cues, an educator could also assign an activity in which students are provided written passage and a list of words in the passage that may be unknown to students that they are expected to analyze for context cues and then define. The students would be asked to write down context cues that led them to discover the meaning of each unknown word and then explain what they believe the word's definition is. Instruction and activities focused on word parts, including analyzing how words are connected by their word parts and what a word's structure means is also very important for students to be able to experience incidental word learning as well.

Another way that teachers can incorporate context cues and promote incidental word learning in their classroom is conducting small vocabulary activities during daily centers. Teachers could conduct picture and vocabulary sorts. For example, students could be shown three different cards with one word on each card describing an emotion and be asked to sort pictures of people or animals displaying characteristics that match or relate to the meaning of each emotion word (Fenner & Snyder, 2017). The context in this case would be the pictures and the details within them and the students would be expected to analyze the context they are provided and make connections.

Incidental Word Learning in the Elementary Classroom

Suggestions for Elementary Educators

Students in general education elementary classrooms are exposed to activities and strategies that promote intentional word learning a lot more than incidental word learning due to a massive emphasis being placed on providing direct instruction. Incidental word learning and the strategies that encourage it have proven to provide learners with word knowledge that is retained longer and acquired more easily. Learners' minds are complex and filled knowledge that teachers need to unlock and build upon. Teachers need to allow students space and opportunities to learn with the knowledge that they have and the skills that they have helped them develop. Educators should provide students with instruction and modeling that show them how to practice word learning when they are met with an unknown term when listening or reading.

Students should be given time during class to pick out books that interest them and read independently. This will give them the opportunity to practice incidental word learning. Assigning reading logs for students is another effective way for students to learn independently

and acquire vocabulary incidentally. Listening to language is crucial to vocabulary acquisition as well. Allowing students to listen to recorded books, books read aloud by adults, and suggesting that parents download the free Epic reading app on their children's home devices are excellent ways to encourage indental word learning while listening to stories. These methods and strategies word for both ELLs and native English speaking students. If teachers are looking to help their ELLs in their general education classroom acquire vocabulary incidentally, some effective methods include teaching students about cognates between languages and providing clears instruction that outlines how to look for context cues that will help them with various language tasks. Incidental word learning benefits all students and teachers and should be implemented in every classroom.

Conclusion

Incidental word learning is the most effective form of vocabulary acquisition and all students of any language background would benefit massively from exposure to tasks and teaching methods that promote it. Less of an emphasis needs to be placed on explicit instruction and intentional learning because learning that occurs incidentally has shown to have been longer-lasting and more meaningful to students. Learners can be incredible teachers for themselves when they are given quality tools, instruction, and resources to learn on their own. Incidental word learning teaches learners to be think critically about the content that they are interacting with and make connections between their background knowledge and new information. It strengthens their cognitive processing and prepares students to be life-long learners. Students will not always be directly told the answers to everything, so it is important that they are informed about how to find information by making educated inferences based on

clues. Educating learners about the different aspects of word and language is crucial. Knowing how to define and spell a word are only small parts of understanding vocabulary. Learners need to understand how to spell, write, and read a word. They should also be able to identify word parts, describe a word's meaning, see connections between words, and understand the context in which words should be used. Knowing vocabulary is a complex concept, meaning that vocabulary instruction with the goal of lasting word acquisition should not be reduced to only simple memorization and repetition tasks. Incidental word learning challenges students to absorb, retrieve, and put together knowledge from various sources to figure out the mystery of a word that is unknown to them. Learning in this way prepares students for when they enter the real world, in which they will need to look at the ever-changing context surrounding them and use the skills that they have been taught to learn about the unknown.

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