LEARNING BY HEART: USING AN INTERACTIVE TUTORIAL ON IDIOMS TO MODEL ACQUISITION STRATEGIES AND TOOLS

A Project

Presented to the

Faculty of

California State University,

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In Partial Fulfillment

of the Requirements for the Degree

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in

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by

Andrianna Kirsten Jobin

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ABSTRACT

This project is an interactive tutorial on idioms for a unit in a multi-level English as a second language (ESL) class. The target audience is English language learners studying in a university or pre-university setting. It is designed to be used independently by students after a brief introduction. The unit adopts a thematic approach. The initial objective is two-fold: to familiarize students with several idioms about love and romance while simultaneously acquainting them with activities promoting vocabulary acquisition. The final objective is to equip students with a variety of acquisition strategies and tools. These strategies are embedded in listening exercises, games, and practice activities. Students are expected to evaluate learning strategies while learning idioms of varying degrees of difficulty. Comprehension of many idioms requires maturity and life experience. Therefore the tutorial is not appropriate for children or beginning ESL students. The tutorial was constructed using an authoring program and HTML for delivery online or on a CD.

ACKNOWLEDGMENTS

I want to acknowledge the professional efforts of my readers, Dr. Brian Newberry and Dr. Eun-Ok Baek. Their insights and encouragement brought me through multiple revisions of this project, each adding depth and rigor to its pedagogical value. I am grateful that their extraordinary patience and endurance exceeded the length of this project. The organization of this project owes its merits to their guidance; the shortcomings are my own.

DEDICATION

This project is dedicated to the most persistent autonomous learners I know: my mom and my mother in-law (and love). Thank you for providing inspiring models of life-long learning. This project owes its inception to my friend, Sherry. Your game, The Language of Love, provided the motivation to teach idioms about love in way that was both fun and relevant. This project owes its persistence to my husband, Jobin. Your patience and confidence in me kept me going when my own was low. This project owes its completion to my friend, Selin. Whenever I doubted I could finish, you reminded me why I should and were a role-model of how I could.

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CHAPTER ONE

BACKGROUND

Introduction

"To go Dutch" does not mean to visit Holland nor does it mean to become a Dutch citizen. This idiom, like all idioms, poses two distinct problems for learners of English. The first problem is recognizing the fact that these words constitute a single unit that has a different meaning from the literal meaning of its individual words. The second problem is figuring out what the phrase does mean: for each person to pay for himself or herself on a date. Even after the idiom is understood, a problem remains – knowing how and when the idiom can be used. Can it be used among friends when eating out? How does it differ from another idiom, "to split the tab"? Finally, the idiom must be remembered, often after many moons of disuse.

In brief, these are the intrinsic problems of learning idioms -- the topic of this project.

Despite the difficulties, English language learners (ELLs) have a compelling motivation to learn idioms: idioms are ubiquitous, indispensable, and fun.

This chapter imparts an overview of the project. First, the motivations for engaging the problem are discussed along with its context. Next, the purpose of the project is explained, followed by its assumptions and significance. Then, the limitations of the project are reviewed. Lastly, a glossary of terms is presented.

Ubiquity

Idioms are especially ubiquitous in colloquial language and in the media. “Idioms are common in all kinds of English, formal and informal, spoken and written. However, informal spoken language is often very idiomatic” (Swan, 1980/1995, p. 244). Within spoken language, idioms are used frequently in all forms of discourse from sitcoms to small talk to personal conversations (Fernando, 1996).

According to COBUILD Dictionary of Idioms (Collins, 1995) idioms are "very common in journalism and magazines, where writers are seeking to make their articles and stories more vivid, interesting, and appealing to their readers. Idioms are often used by both journalists and politicians as shorthand ways of expressing opinions or conveying ready-made evaluations” (p. vi).

Indispensability

Not only were idioms used frequently on TV, but Cooper (1998) found that understanding them was crucial to

understanding the plot. This observation extends to everyday conversation, as per the familiar complaint of language students that they cannot understand teenagers and other native speakers who use many idioms.

Idioms also play an indispensable role in talking indirectly yet distinctly about sensitive subjects, such as saying “He had an affair” rather than saying “He had a sexual relationship with someone other than his spouse.” Often using fewer words, an idiom conveys a clear message in less explicit language. Consider the number of euphemisms for death (i.e., ‘passed away’, ‘kicked the bucket’, ‘met his maker’, etc.) that are also idioms, or rather became idioms because they conveyed the idea less bluntly. Although we can and do make up our own euphemisms (e.g., perhaps ‘joined his ancestors’), the existence of idioms makes communication smoother.

Idioms are also critical to the perception of native level speaking ability. In a study of college students in the same remedial writing class, Matsnobu (1981) found that native speaker judges could easily distinguish writing samples of native speakers from non-native speakers by the more frequent collocation errors in samples from non-native speakers and more frequent idiomatic phrasing in the samples from native speakers.

Enjoyable

In spite of their frustratingly elusive meanings, idioms can be fun and interesting. Not only do they add color and imagery to language (e.g., 'feeling blue' and 'blind date'), but they also reveal our cultural values, attitudes, and paradigms (e.g., consider 'fall in love' and 'play hard to get').

Statement of the Problem

For the aforesaid reasons, American Idioms is the subject of a popular class in the Conversation and American Culture program at the International Education Programs at the University of California Riverside Extension. The time frame for the course is typically three or four weeks of daily classes. Students are typically of university or pre-university ages. Their English proficiency levels vary from group to group, but most students are at the intermediate and advanced levels. At the beginner level, phrasal verbs are taught instead of idioms. In multi-level classes, the syllabus must include idioms of varying difficulty, and allow students to progress at their own rates.

Nagy & Herman (1987), cite the following problems of vocabulary learning, which are equally true for learning idioms:

1. The number of words is too many to teach.
2. The meaning often cannot be understood from context alone.
3. The optimal rate of acquisition is uncertain.
4. Each individual learns differently.

In addition, there are other factors which conspire to make idioms more difficult to learn than other vocabulary:

5. Collectively, idioms occur very frequently in spoken language.
6. Individually, most idioms recur infrequently.

Taken together, these facts amount to a catch-22 - idioms can neither be readily ignored nor understood.

Frequency

Taken collectively, idioms are used at an astounding rate. Pollio, Barlow, Fine, & Pollio (1977) found that, on average, 4.08 idioms per minute were used in a sample of 200,000 words from political debates, taped psychotherapy sessions, and compositions written by students and adults. Likewise, in an analysis of 3 hours of taped television

programs, Cooper (1998) found idioms were spoken at the rate of approximately 3 per minute.

Conversely, when taken individually, idioms are used relatively infrequently. When was the last time you or your date suggested "Let's go Dutch"? Possibly never, but yet it is a highly familiar idiom. Fredrickson (2003) reports that studies show that "individual idioms generally occur less than ten times in ten million words of text" (¶2).

One could be forgiven for inferring from this fact that idioms are avoidable. Indeed, most language learners do avoid using idioms, long after they are otherwise fluent in a language. Even native speakers (NS) use fewer idioms when speaking with non-native speakers (NNS) and young children. However useful, avoidance is nevertheless a tenuous strategy given the collective frequency with which idioms occur and the rich meanings they convey.

Understanding Unknown Idioms

If idioms cannot be avoided, how can they be understood? How can learners comprehend unknown idioms? Using context alone is frequently insufficient since idioms often substitute for more explicit descriptions. After context, glossaries and dictionaries are usually the next most popular resource. However, definitions and

translation do not convey the full meaning and are not convenient during conversation or other speeded tasks. So, other tools and techniques are needed to comprehend idioms.

Volume

There are over 6,000 idioms commonly used in contemporary English. This volume of idioms cannot be accommodated in the limited hours of classroom instruction. The American Idioms course is likely to be the only class that these students ever take specifically about idioms. When spoon-fed large amounts of comprehensible input, some students are able to remember up to 10 idioms a day, or 200 idioms in a month. This is only a small fraction of the idioms English language learners (ELLs) need to know. Furthermore, rote methods do not produce communicative competence. Clearly, learners cannot rely on instruction for learning idioms.

Acquiring Idioms Autonomously

Therefore, strategies and techniques are needed to learn on their own. Even when students are surrounded by others who are using effective learning strategies, many students do not pick up on them.

Therefore, instruction needs to teach how to learn, rather than simply studying idioms formally. The paradox

here is that the students do not expect to pay good money to teach themselves idioms. Most learners come into the classroom expecting to be taught idioms, not how to learn idioms. Even when students understand the value of self-regulation, the fact remains that active learning requires more effort than passive learning. The challenge is to satisfy students who feel they are paying for learning to be made easier or more enjoyable.

Optimizing the Rate of Acquisition

How can learners most efficiently acquire idioms on their own? Acquisition of a vocabulary item involves knowing many things: the pronunciation, meaning, form, and appropriate usage. Typically, learning these things requires repeated exposure to comprehensible input.

English teachers setting a syllabus confront deceptively simple questions about this input: How many idioms should be studied at once? How much time should be spent per group of idioms? Which idioms should be chosen? In addition, there are the chronic challenges of language acquisition: What is the best way to provide context and comprehensible input? What activities will best promote long term acquisition?

It is difficult enough for a professional English teacher to answer these questions. How will students face

these questions on their own? Without explicit guidance in these matters, most students are, in fact, not efficient at learning idioms.

Accommodating Individual Differences

Even more so than other vocabulary, students of similar levels of English proficiency vary in their comprehension of idioms; some students require no explanation, while others are perplexed by an idiom. This is due to a variety of individual differences: prior exposure, linguistic and conceptual similarities between English and their native language, and individual learning strategies and techniques. Working with these individual differences is a challenge.

Purpose of the Project

The chosen solution to the aforesaid problems was to design a tutorial for students to use autonomously in and out of class. Students spend far more of their time outside the classroom than in it. Websites can make the most of this time out of the classroom; they allow the class to focus less on instruction and more on clarification and individual problems.

It is not an option to reduce the number of idioms, lest students feel they did not learn enough. Enabling

them to learn more idioms outside of class can satisfy the obligation to provide them with many idioms, while using class time to focus on broader learning strategies and communicative competency.

The purpose of the tutorial was to develop a resource to consolidate various aspects of idiom learning (e.g., pronunciation, definitions, and usage) into a few easily referenced pages and practice exercises which students can go over at their own pace.

Learners of idioms have a long road ahead of them. In designing the interactive tutorial for learning idioms, the overall goals are to make the journey more interesting, less frustrating, and more efficient.

A secondary purpose of this project has been to provide a model of various learning strategies and techniques that students can apply to future learning. The tutorial is intended to serve as a scaffold for autonomous idioms learning. It is hoped that the tutorial increases their motivation, self-sufficiency, and comfort in using the idioms outside of the classroom.

Assumptions

A tertiary purpose has been to explore various assumptions about the benefits and effectiveness of the

tutorial format. One assumption is that multimedia frees the teacher to assess and attend to individual needs rather than focusing on content delivery. Another supposed benefit is that a tutorial can provide various sources of exposure, accommodating a variety of learner preferences. It has been supposed that the ability for individuals to refer to the website on an as needed basis, both in and out of class, enables students to take more responsibility for their own learning.

Attention has been paid to bolstering these presumed benefits during the development and evaluation of the product. Eventually, it would be worthwhile to study the effectiveness of the product in achieving these assumed benefits; however scientific proof is outside the scope of the current project.

Significance of the Project

Cultural Literacy

Idioms exist in all languages and convey a common set of references which constitutes our cultural literacy. However, "Many young people strikingly lack the information that writers of American books and newspapers have traditionally taken from granted among their readers from all generations" (Hirsch, 1987, p. 16). To the

advantage of ELLs, this general trend has resulted in the simplification of language in popular newspapers. To their disadvantage, "studies of the factors in reading comprehension have also found consistently from the 1920s to present that vocabulary meanings are the strongest factor in reading comprehension (Chall & Stahl, 1985; Thorndike, 1973-74; as cited in Chall, 1987, p. 11). Moreover the need for simplified language has resulted in a two-tier system of publications – those for the consumption of the more erudite and those for mass consumption. Students who limit their reading to popular news and magazines will find themselves unprepared for other venues of information, and limited in their sources of information about current issues. Those not conversant in cultural background are unprepared for socially important work which requires cultural literacy.

Hirsch (1987) bemoans the failure of our schools to teach content that builds cultural literacy:

> The standard of literacy required by modern society has been rising throughout the developed world, but American literacy rates have not risen to meet this standard. … Only two thirds of our citizens are literate, and even among those, the average level is too low … Ultimately our aim should be to attain universal literacy at a very high level, to achieve not only greater economic prosperity but also greater social justice and more effective democracy. (p. 14)

However, we must also consider that many of those with poor literacy are immigrants to American culture who may not have been educated in American schools. These immigrants need resources for building cultural literacy that can be accessed outside a classroom.

Hirsch's observations about the decline of cultural literacy are significant for idioms study. However, contemporary educators have come to recognize that a traditionalist formulation about a single culture in which society operates does not accurately reflect contemporary society. Moreover, such traditional formulations and the notion of "standard spoken English" are based on essentialist notions of a single truth, which do not reflect the extent to which our common language and knowledge is constantly changing. With changing communication technologies, the lack of standardization will only become more inevitable. Indeed, students need to be able to function in multiple cultures. The concerns of multiculturalism are beyond the scope of this work, but the idea that students operate in a variety of cultures is now common sense to most educators.

What Hirsch observed as a decline in cultural literacy may in fact have been a shift into literacy in multiple cultures. Even if this is so, his concern about a

common language and background for society is all the more poignant. So, it is not only that entrants to American culture need familiarity with idioms in order to succeed, but that American culture needs them to learn its vocabulary in order to maintain its cohesion. American idioms provide a lens on American values and lifestyle through which our attitudes about time, family, work, love, etc. are revealed.

Autonomy

This project adds to the growing body of projects in the area of learner autonomy and distance learning. If such attempts to decentralize learning out of the classroom are successful then this may enable more rapid progress for learners by utilizing their time out of class more effectively, while enabling teachers to focus on individual needs in class. This also allows students to decide for themselves which things they want to learn. If increased improvement can be shown, it may also be possible to get further administrative support for integrating technology into the curriculum. Moreover, a lot of idioms content is available to students online, and students may be taught to generate their own content. The outcome of this project may also indicate how such content may be adapted for class usage, how it must be

supplemented, and how class time might focus less on content and more on learning skills to use with content and opportunities outside of the classroom.

Limitations

During the development of the project, a number of limitations were noted. Limitations were noted in the following areas: learner autonomy, technical resources, and time constraints.

Learner Autonomy

Enabling students to focus independently on their choice of exercises posed more of a problem than initially anticipated. Some students chose to focus on the easier idioms to the exclusion of more challenging ones. These students did not learn the meaning of the more difficult idioms, although they may have learned to recognize them as idioms; their quiz scores on these idioms were no better than they would have been on statistical chance alone. Given their proficiency levels, the decision to ignore the more difficult idioms may have been a good one for some students. However, some students might have learned more if they had pushed themselves. For students who lack self-motivation, autonomy is a limiting condition. In order to learn more, they desire more

structured learning environments with external consequences.

Technical Resources

Some students have access to computers at home and so, are not reliant on school facilities for their out-of-class work. Although all students did have access to the computer lab every afternoon, students with their own computers may be privileged above others with this approach.

By and large, university students are computer savvy and can use the Internet without much assistance. Occasionally, there may be a student who needs extra guidance. If this approach were to be integrated into curriculum on a wider scale or into other contexts, some more formal mechanisms and training for these students might need to be instituted.

Time

Another limitation was the length of the course. Since the entire course is less than a month, the unit cannot take more than a week of class time. This makes it challenging for students with busy schedules to take advantage of the out-of-class free time or schedule review and practice sessions for optimal memorization.

Definition of Terms

The following terms are defined as they apply to the project.

Autonomy - the condition of being self-governing

Autonomous learning – learning which occurs in absence of external regulation; the degree to which learning is autonomous is the degree to which external regulation is absent (see also: *Self-regulated learning*)

Autonomous learner – a learner who lacks external regulation; (positively) a learner who does not require external regulation and is able to successfully regulate his or her own learning

Acquisition - the cognitive process of acquiring skill or knowledge

Affordance - a property of an object, or a feature of the immediate environment, that indicates how to interface with that object or feature

Blog – an online diary containing journal entries, commentary, or a log of articles from other sites, which can include items of personal interest or have a set topic or theme

Collocations - conventional word combinations. E.g., *"a burning desire" or "a blazing row", but not "a*

blazing desire" or "a burning row" (Swan, 1980/1995, p. 243)

CAI - computer assisted instruction

CALL – computer assisted language learning (see also: *TELL* and *WELL)*

CBI - computer based instruction

CBL - computer based learning

CMC - computer mediated communication

Communicative competence - the ability to use the forms of a language appropriately

Computer tutorials – programs designed to act as tutors or teachers for students

Cultural literacy – a common set of cultural references shared by literate people; "the network of information that all competent readers possess"

> It is the background information, stored in their minds, that enables them to take up a newspaper and read it with an adequate level of comprehension, getting the point, grasping the implications, relating what they read to the unstated context which alone gives meaning to what the read. … Cultural literacy lies *above* the everyday levels of knowledge that everyone possesses and *below* the expert level known only to specialists. (Hirsch, 1987, p. 14 and 19)

EAP – English for academic purposes

EFL – English as a foreign language

ELL - English language learner

ESL – English as a second language; learning English in a native English speaking enviroment, as in contrast to EFL; also the superordinate term for all SLA in English, regardless of setting

Euphemism - an inoffensive expression that substitutes for one that may be offensive

Fluency – the ability to express oneself readily and effortlessly

Gloss – provide a brief definition of an unfamiliar word in a reading assignment

HTML – Hypertext markup language; the code which generates web pages

Idiom – a phrase that cannot be understood literally; a phrase that has a different meaning than the additive meanings of the individual words; "a common phrase or a sentence whose meaning is not clear from the meaning of its individual words and which must be learned as a whole unit … [such as] … *break even* (meaning 'make neither a profit nor a loss') or *a can of worms* (meaning 'a complicated problem')" (Swan, 1980/1995, p. 243)

L1 – a person's first language

L2 – a language learned after the first language

Learning - the act, process, or experience of gaining knowledge or skill

Likert scale - a survey question asking respondents to rate the level at which they agree or disagree with a given statement

Example: I enjoyed this exercise.

strongly disagree 1 2 3 4 5 6 7 strongly agree

LTM (Long term memory) – type of memory which stores past events

Method – a systematic way of doing something; A systematic set of procedures and technqiues used in a particular discipline

Modality - any of the various types of sensation, such as vision or hearing

Morpheme - the smallest meaningful unit in the grammar of a language

MP3 – a digital file containing a song or other audio data that is encoded using the MPEG-3 standard, optimized for digitally transmitting music over the Internet

Noun phrase – a "phrase that can function as the subject or object of a verb" (WordNet, 2002)

NNS – non-native speaker

NS – native speaker

Neurolinguistics - the study of the relationships between the human nervous system and language especially with respect to the correspondence between disorders of language and the nervous system

Opaque idiom – an idiom whose metaphor or logic is difficult to understand (see also: *Transparent idiom)*

Phrasal verbs - verbs with particles or prepositions, common in informal expressions

Examples: "She just doesn't know how to bring up children" and "I gave up chemistry because I didn't like it" (Swan, 1980/1995, p. 243).

Questionnaire - a written set of questions or statements that assess personal information, behavior, reported performance, attitudes, preferences, and opinions

Scaffolding – a system of temporary supports for performing tasks slightly above one's ability level

Schema - the organization of experience in the mind or brain that includes a particular organized way of perceiving cognitively and responding to a complex situation or set of stimuli

Self-regulated learning – the ability of the learner to control his or her own learning (see also: *Autonomous learning*)

Self-regulated learner – a learner who is able to successfully control his or her own learning (see also: *Autonomous learning*)

Semantic differential – a survey question asking respondents to rate their opinion on a linear scale between a pair of adjectives; a variation of the Likert scale

Example: Please rate this exercise.

easy 3 2 1 0 1 2 3 difficult

Skill - an ability that has been acquired by training or experience

SLA - second language acquisition

Speeded task – a task which does not allow time to pause for reflection

STM (Short term memory) – type of memory which stores temporary events (a few seconds ago)

Strategy - a plan of action intended to accomplish a specific goal

Survey – the process of asking questions to gather information about subjects' outcomes, attitudes, preferences, beliefs, and opinions

Technique - a practical method or art applied to some particular task

TEFL – teaching English as a foreign language

TELL – technology enhanced language learning

Transparent idiom – an idiom which is easy to understand, due to a clear metaphor or logic (see also: *opaque idiom)*

UI (user interface) – the appearance of the website and the functional aspects such as navigation to and from pages, submission of forms, etc.

Unspeeded task – a task which allows time to pause for conscious reflection; opposite of *speeded*

WELL – web enhanced language learning

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Chapter Two consists of a discussion of the relevant literature. Specific areas of literature discussed are language acquisition methods and strategies, vocabulary and idioms learning strategies, autonomous learning and self-regulation, motivation, web usability, and instructional design.

In reviewing the literature, two distinct areas of debate are evident – method and media. According to some methods, media are likened to "delivery trucks" (Kozma, 1991, p. 205), while others say that each medium presents its own unique environment from which learners extract information and integrate it "with information already stored in memory" (Kozma, 1991, p.179). While method traditionally has been the main area of debate, the use of new media and technologies is transforming the landscape of learning, adding new dimensions to how these methods can be applied and consequently enriching the debate between them.

Language Acquisition

Setting

The foremost factor in language acquisition is the setting under which it occurs. Settings can be distinguished according to resources, degree of language exposure, as well as formality.

Popularly, a distinction is made with regards to the setting of second language acquisition (SLA) between "second language" and "foreign language" settings, which are supposed to vary in their degree of language exposure. The term "second language" is used as a superordinate term for all language acquisition after the first language, but is also used in contrast to the term "foreign language". The term "foreign language acquisition" is used to describe learning "outside of an environment where the second language is spoken natively." In contrast, a "second language is one being acquired in an environment in which the language is spoken natively" (Larsen-Freeman & Long, 1991, p. 6). Of course, English as a second language (ESL) environments are generally considered to be more effective than English as a foreign language (EFL) ones because of the benefits of immersion.

Traditionally, learners had to make the most of their environment or move to another one. However, as learners

in various foreign countries have learned to interact online, a new category of learning has emerged. Increasingly, English is used as a medium for online communication in a new setting, cyberspace. Cyberspace does not neatly fit in to this traditional distinction between foreign and native contexts. Are online learners using English as a foreign or as a second language? In classes where learners from the same country are mainly interacting with the online environment and each other, the determining factor would be the location of the class – i.e., the class would be considered English as a foreign language (EFL) if it is in a foreign country. In today's virtual online environments, learners can have the best of both worlds. In order to avoid these distinctions, the term second language acquisition (SLA) is used to discuss acquisition across various settings.

What is the significance of this distinction between acquisition in a native speaking environment, acquisition in a foreign environment, and acquisition in cyberspace?

Naturalistic versus Instructed Learning

By way of answering this, another distinction is needed - between instructed and naturalistic learning. Naturalistic learning, or learning through immersion and interaction, is how children learn their first language.

By definition, naturalistic learning is unlikely in a foreign environment, except where care givers speak the target language. Instructed learning occurs in both native and foreign settings, but native settings offer greater opportunities for naturalistic reinforcement and practice of instructed learning outside the classroom. Online learning has the potential for blurring the distinctions between instructed and naturalistic learning if it is designed with affordances for learners to interact with the content and each other in a natural manner.

A tutorial format obviously involves instructed learning, yet also has the affordances and interactivity of online learning. Is it therefore possible to claim some of the benefits of naturalistic learning? How can instruction play a more effective role in SLA learning in the online domain? What difference does the setting make in terms of end results?

Linguistic versus Communicative Competence

Just as there are two types of second language acquisition (SLA) settings, there are also two standards of proficiency. The first is communicative competence and has been the usual result of immersion in English as a second language (ESL) contexts. The second is linguistic

proficiency and has been the traditional domain of English as a foreign language (EFL) contexts and language classes.

Ultimately, learners are considered competent in a language to the extent that they can use it to convey their ideas and understand others. In that sense, communicative competence is not a kind of knowledge per se, but rather an outcome of communication tasks.

In contrast, linguistic proficiency focuses on knowledge about the language, such as its syntax and vocabulary. In this regard, learners are considered proficient in a language to the degree that they are familiar with the forms and vocabulary of a language.

Linguistic proficiency is something which foreign language teachers have taught overtly with varying degrees of success for centuries.

> The prevailing view held that language proficiency could be divided into unrelated skills (listening, speaking, reading, and writing) and knowledge of language components (vocabulary, phonology and grammar). Oller (1976) challenged this view by hypothesizing that language proficiency is a unitary and indivisible trait, i.e., it cannot be portioned into distinct components. (Larsen-Freeman & Long, 1991, p. 38)

To any language student or student, particularly those in EFL contexts, it was obvious that linguistic proficiency was not sufficient for communication and did

not constitute total language proficiency. In 1980, Cummins argued in favor of

> … the notion of a global language-proficiency factor 'which can be assessed by a variety of reading, writing, listening, and speaking tests and which is strongly related to general cognitive / academic language proficiency (CALP) … To complement this, Cummins identifies a second, independent dimension of language proficiency. This factor he calls basic interpersonal skills (BICS), which consist of accent, oral fluency and sociolinguistic competence. (Larsen-Freeman & Long, 1991, p. 39)

Basic interpersonal skills (BICS) are one component of what is now called communicative competence. Aside from grammatical competence, the other competencies relevant to communication include socio-linguistic and strategic competence. "Strategic competence means a speaker has a repertoire of communication strategies to compensate for breakdowns in communication" (Larsen-Freeman & Long, 1991, p. 39). In the case of idioms study, it is not essential that learners attain fluency with all idioms that they study. For unspeeded tasks, linguistic proficiency with idioms is sufficient. Even for communication tasks, the ability to negotiate communication gaps may be more useful than fluency with particular idioms.

Insofar as communicative competence with idioms is desirable, what behaviors would indicate that it has been achieved? Conveniently, TESOL (Teachers of English to

Speakers of Other Languages) has set distinct standards for various grade levels and adults. The standards related to idioms for grades 9-12 are given in the table below.

Table 1. TESOL Standards for Grades 9-12: Idioms

Goal 3, Standard 1		
To use English in socially and culturally appropriate ways:		
Students will use the appropriate language - variety, - register, and - genre according to - audience, - purpose, and - - setting.	Relevant Descriptors: - Respond to and use slang appropriately - Respond to and use idioms appropriately.	Sample Progress Indicators: - Write a dialogue incorporating idioms or slang. - Use idiomatic speech appropriately.

Teachers of English to Speakers of Other Languages. (1997). English as a Second Language (ESL) Standards for Grades 9-12. Alexandria, VA: TESOL.

Using and responding to "idiomatic speech appropriately" are worthy ambitions, but how do learners reach these lofty goals? What conditions and steps are needed to attain communicative competence?

Learning versus Acquisition

According to contemporary theorists, instructed and naturalistic learning differ not only in their settings

and conveyance methods, but also in the mental processes they employ. “Sometimes a distinction is made between second language learning which takes places within a classroom and second language acquisition which occurs ‘naturally’ outside a classroom” (Larsen-Freeman & Long, 1991, p. 6). In the dominant view, learning and acquisition are distinct processes, with equally distinct results in language proficiency. Acquisition is defined as the subconscious process of internalizing the second language (L2) through natural communication in a manner similar to how a first language (L1) is learned. On the other hand, ‘language learning’ is the conscious study of the formal properties of the L2. In contemporary dogma, learning is often regarded as the poor cousin of acquisition; the former is alleged to result in inferior fluency. In contrast to theory, the popularity and success of English courses in the United States testifies that many learners find value in formal instruction even when immersed in the target language.

Idioms are no exception to lack of consensus about the relative merits of instruction and naturalistic learning. On one end is the view that it “not necessary for students to make a special effort to learn and use idioms: they will learn the most common idiomatic

expression naturally along with the rest of their English" (Swan, 1980/1995, p. 234). In contrast, others insist "they require special attention in language programs and should not be relegated to a position of secondary importance in the curriculum" (Cooper, 1998).

Krashen's Monitor Model

At the heart of the acquisition-learning controversy is the most comprehensive of second language acquisition (SLA) models -- The Monitor Model, asserted by Krashen (1981,1982), which consists of five hypotheses:

- *The Acquisition Learning Hypothesis*: SLA uses two systems of knowledge, acquisition (unconscious) and learning (conscious).
- *The Natural Order Hypothesis*: Grammatical structures are acquired in a predictable order.
- *The Monitor Hypothesis*: Learned knowledge can influence language performance via Monitoring.
- *The Input Hypothesis (i+1)*: Acquisition calls for input just beyond the current level of comprehension.
- *The Affective Filter Hypothesis*: Input is vetted by an Affective Filter, impelled by motivation, self-confidence, and anxiety.

The Acquisition Learning Hypothesis. Krashen amplifies the acquisition-learning distinction by postulating that the two processes constitute two distinct systems of knowledge. Whereas acquired knowledge can be used for real communication, learned knowledge can only act as an inspector at the gates of communication, merely monitoring the output of the acquired system. Learned knowledge results in "separate set of simple grammar rules, or knowledge of the SL" which is only accessible given three conditions: "there was time", "the learner was focused on form", and "(obviously) when the learner knew the rule" (Larsen-Freeman & Long, 1991, p. 240-242).

McLaughlin (1978) points out that the acquisition-learning hypothesis postulates that the brain processes conscious and unconscious input differently. It is assayed that both types of knowledge are stored in the left hemisphere, although learned knowledge may not be stored in the language areas. Each is accessed differently; acquired knowledge is available for automatic processing, while learned knowledge is accessible only by the Monitor.

Natural Order Hypothesis. The Natural Order Hypothesis arose from studies showing that learners acquire grammatical morphemes in a predictable order. Although the order was unalterable, it could be

temporarily disturbed by conscious effort (i.e., Monitoring) during unspeeded tasks such as reading and writing (Krashen, 1977).

The Monitor Hypothesis. Krashen (1978) held that the Monitor could employ the learned system to intrude on performance tasks, thereby resulting in more accurate use of certain morphemes governed by low-level grammar rules (e.g., the regular past –ed). Monitoring is not the same as natural self-correction. Self-correction is when learners "pause to see whether a word or construction looked or sounded right", such as comparing "images of two possible spellings of a word". In contrast, monitoring is when learners employ a spelling rule such as "i before e, except after c". Krashen's learners varied in their use of the Monitor, ranging from under-users to over-users. Optimal users were those who employed the learned system to improve accuracy without too great a loss of fluency. Although Krashen has not put forward any empirical evidence for the existence of a Monitor mechanism in the brain, the behavior of monitoring is observable to anyone who has studied a language. An inadequacy of the theory is that it lacks a method of determining whether someone is an optimal monitor user, an under-user, or an over-user.

Most disputable is Krashen's additional contention that knowledge could not pass between systems (Krashen & Scarcella, 1978; Krashen, 1985). If this contention were true, instruction would be all but useless except as a means of providing comprehensible input.

The Input Hypothesis. The input hypothesis states that "SL is acquired through processing *comprehensible input* (CI), i.e., language that is heard or read and *understood*" (Larsen-Freeman & Long, 1991, p. 242). Progress is achieved when a learner receives input that contains structures one step beyond the current stage. Unfamiliar structures are understood through "context, knowledge of the world, previously acquired linguistic knowledge, and in a classroom, by these means and such devices as pictures, translation, and explanation" (Larsen-Freeman & Long, 1991, p. 242). Two corollaries of the "i+1" hypothesis are especially disputed:

1. Language that is too advanced to be understood is not helpful.
2. Instruction only benefits SLA insofar as the input is more comprehensible; learning due to instruction only shows up on unspeeded tasks, not during communication.

On the contrary, there is evidence that rich and incomprehensible input is of value in SLA (White, 1987). Moreover, formal learning can be transferred into acquired stores through a combination of 'use', 'practice', 'routinization', and 'consciousness-raising' (Stevick; Bialystok; McLaughlin; Rutherford and Sharwood-Smith 1988, as cited by Larsen-Freeman & Long, 1991, p. 323). Of particular note for idioms learners are "L1 studies showing that learning of patterned strings of symbols is facilitated when learners are told that patterns exist, instructed to look for them, and the patterns themselves are made salient through examples, rather than through implicit presentation alone" (Reber, Kassin, Lewis and Cantor 1980, as cited in Larsen-Freeman & Long, 1991, p. 324).

A conciliatory view between the interface and non-interface positions is 'Pienemann's Teachability Hypothesis' which "predicts that instruction will speed up development, but does so constrained by the learner's current processing capacity, thereby preventing acquisition-sequence violations" (p. 325).

The Affective Filter Hypothesis. "Lack of motivation, low self-esteem, debilitating anxiety," and other affective conditions can conspire to "raise the filter"

thereby blocking input (Larsen-Freeman & Long, 1991, p. 243). Although a scientific sounding term, the affective filter is simply "a metaphor" lacking specificity about "which affect variables … and at what levels, serve to 'raise the filter'" (Larsen-Freeman & Long, 1991, p. 247). It is also a matter of intrigue what brings about the use of the filter since it is not apparent in children before adolescence.

Beyond the Monitor Model: When Instruction Helps

The veracity of the monitor model is highly debated. Points of contention include: learner variability, whether the rift between unconscious and conscious knowledge is not instead more of a continuum, the exaggerated importance of comprehensibility, and the precise mechanisms of the Monitor and the Affective Filter. All that can be said for sure is that it provides a broad impression of how different modes of learning may be stored differently in the brain, and recognition that knowledge may be more easily retrieved via some approaches than others. The key to resolving this debate is observational research and the growing body of information about how the brain works.

In one study of Italian ELLs, Parvatti showed that performance of instructed students and naturalistic

acquirers were both found to have equally progressed from least to most marked constructions, however instructed learners had "reached higher levels of SL attainment" (Larsen-Freeman & Long, 1991, p. 315).

Whether there is a similar order of acquisition for lexical items as well as grammatical items is unknown, since there is less research in the area of lexical acquisition. However, it is clear that the brain has its own structure for some language features and it only makes sense that simpler and more essential language will be learned sooner than more complex and less common language features, including vocabulary.

Formal instruction was found to interfere with this natural order of acquisition in trivial and temporary ways. "On the other hand, instruction has what are possibly positive effects on SLA *processes*, clearly positive effects on the *rate* at which learners acquire the language, and probably beneficial effects on their *ultimate level of attainment"* (p. 321).

In a similar vein, research by Lamendella (1979) corroborates the acquisition-learning distinction. Unlike Krashen, however, Lamendella supposes that adults can successfully learn an L2 through instruction or another

way than they learned L1. Lamendella identifies two key systems in language functioning:

- The communication hierarchy: used for language and interpersonal communication
- The cognitive hierarchy: controls information processing activities used for language

Each system is composed of various levels, ranging from higher to lower order, and each associated with various levels of neural organization (which Lamendella does not specify). Language learned through the cognitive hierarchy, such as through practice drills, is not accessible for communication because "the executive functions of the communication hierarchy do not seem to have the capacity to call up automated subroutines whose construction was directed by the cognitive hierarchy" (p. 17). Nonetheless, the cognitive hierarchy may be used for other language tasks not requiring communication, such as reading.

The task facing the language learner is to "identify the functional hierarchy best suited to this learning, then establish the appropriate level and subsystems within the hierarchy with which to begin the learning process" (Lamendella, 1979, p. 15). In other words, Lamendella claims that second language acquisition (SLA) can be

explained with reference to (1) which neurofunctional system is used – the communication or the cognitive – and (2) which level within the chosen system is engaged.

Neurolinguistic Explanation

The physical basis in the brain for the divide between fluency and recognition was established through the study of people with aphasia in 1861 by Paul Broca, a French neurologist and again in 1874, by Carl Wernicke, a German physician. Broca found that:

> Patients who could understand spoken language but had difficultly speaking tended to have damage to a part of the brain's left hemisphere that became known as Broca's area… Wernicke found that patients with fluent speech but severe comprehension problems typically had damage to another part of the left hemisphere, which was dubbed Wernicke's area. … Wernicke's area, involved in speech comprehension, is located near the auditory cortex, the part of the brain that receives signals from the ears. (Hickok, Bellugi, & Klima, 2001, p. 58)

This suggests that there is a strong connection between the organization of language in the brain and the functions of hearing and speaking. If so, then this confirms the recommendation to separately practice each set of competencies, with distinct activities for receptive competencies versus speaking competencies.

The Fluency – Recognition Continuum

What is not clear from the findings of aphasic patients is whether written and oral competencies go hand

in hand or if they too require separate practice. Do listening and reading reinforce each other or do they require separate practice? Likewise, does the ability to speak about a topic transfer over to an ability to write about it, or visa-versa? Hickok, Bellugi, and Klima's (2001) research of deaf signers indicates that written and oral competencies may transfer well. Just as Broca's area is active in non-deaf individuals when they are speaking, it is similarly active in deaf people when they are signing. Likewise, Wernicke's area is used to understand both speech and signs. The way the brain is organized does not seem to be related to the way learners perceive and use language. This bodes well for use of online communication media such as chat, blogs, and discussion forums for vocabulary acquisition, since it implies that language practiced in these ways will lead to oral communicative competency as well.

According to Hickok, Bellugi, and Klima (2001), spoken and sign languages appear to be similar in their linguistic transformations even though their inputs and final outputs are radically different:

> At the sensory end, for example, the peripheral processing for speech occurs in the auditory cortices in both hemispheres, whereas the initial processing of signs takes place in the visual cortex. But after the first stages of processing, the signals appear to

> be routed to central linguistic systems that have a common neural organization in speakers and signers. … Visual-spatial information is not confided to a single region of the brain. Instead different neural modules process visual inputs in different ways. For example, visual inputs that carry linguistic information would be translated into a format optimized for linguistic processing, allowing the brain to access the meaning of signs, extract grammatical relations, and so on. But visual stimuli that carry a different kind of information – such as the features and contours of a drawing – would be translated into a format that is optimized for, say, carrying out motor commands to reproduce that drawing. (Hickok, et al., 2001, p.65)

This implies that it is important that students clearly separate the imagery of an idiom from its meaning as early as possible. It is common practice with idioms teaching to include cute drawings of the idiom, typically capturing its literal imagery not its idiomatic meaning. Although this promotes retention of the form of the idiom, it may cause problems with the processing of its meaning if it is not clear what kind of information is conveyed.

Decoding Idioms

When decoding the meaning of a phrase, there are always two interpretations available – the literal meaning and the figurative meaning. In the case of idioms, the figurative meaning is the correct one. How do we arrive at the correct meaning? There are several hypotheses on how the brain decodes idioms. Since there is no conclusive evidence for one hypothesis over another, they will be

presented as equally viable strategies available to learners.

One hypothesis is that the entire phrase is stored in the mental lexicon with the figurative meaning. The figurative meaning is accessed at the same time as the literal meaning, then they are compared to see which best fits the context. If this hypothesis were true, we would seldom make mistakes since both meanings are given equal consideration. This hypothesis represents a useful strategy for comprehension while reading, when we have more time for analyzing the context.

A similar hypothesis is that the entire phrase is stored in the mental lexicon with the figurative meaning, but that the idiomatic meaning is processed first. If it fits the context, the literal meaning will not be processed (Gibbs, 1986, 1992). This hypothesis represents a better strategy for listening, but this strategy can only be used if the words are recognized as a single phrase. If this hypothesis were true, it would be useful to learn to recognize as many idioms as possible. Even without understanding an idiom, merely recognizing it allows learners to seek clarification.

Another hypothesis is that idioms are stored in a secondary lexicon for figurative language (Bulut & Ilkay,

2004, p. 106). Accordingly, we first process the literal meaning and check if it fits the context. Only if it doesn't, do we search for a figurative meaning. This hypothesis represents a useful strategy for listening, when learners cannot process too many meanings while keeping up with the rate of speech. Still, there is greater likelihood of misunderstanding.

Learning and Acquiring Idioms

If, as much of the literature suggests, the distinction between learning and acquisition has merit, what would it mean for the acquisition of idioms? Learning an idiom would imply having knowledge of its meaning and perhaps usage, whereas acquisition of an idiom would imply being able to use it fluently in an appropriate context.

Swan (1980/1995) echoes Krashen's views on acquiring idioms without interference from the Monitor in his advice to English language learners (ELLs):

> Students should not worry because they do not know all the collocations and other idiomatic expressions that are commonly used by English speakers. If they use non-idiomatic ways of expressing ideas, they will normally be understood, and English speakers do not expect foreigners to speak perfectly, idiomatically, or correctly… If they try to consciously fill their speech and writing with idioms the effect will probably be very strange. (p. 244)

Consider what this distinction might mean in real life situations. The benefits of learning idioms versus acquiring them are summarized in the following table.

Table 2. Benefits of Learning versus Acquiring Idioms

Benefits of Learning Idioms	Benefits of Acquiring Idioms
1. Recognize that the words are an idiom, and not literal.	1. Understand the meaning after repeated exposure
2. Recall the meaning in time-free situations, such as reading the newspaper, leisure reading, home TV/ movie watching with pause/rewind/TIVO options	2. Recall the idiom in timed situations such as movie theaters or performances.
3. Use the idiom in time-free situations, such as letter writing, email, a speech, or in slow conversation by using stalling techniques	3. Use the idiom in timed situations such as normal conversation and online chat.
4. Search for meanings of the idiom when recalled meaning is not clear or matching the context	

For idioms learners, the acquisition-learning hypothesis as articulated by Krashen and Lamendella implies that idioms studied consciously would only be accessible during unspeeded tasks such as reading and writing. This is useful for low-frequency idioms which occur in newspapers and magazines and points to these media as a rich source for learning idioms. Online communication technologies also open up previously unknown opportunities for two-way communication through chat,

forums, etc. These offer the advantages of unspeeded written tasks along with the discourse style of oral communication, potentially enabling transfer between cognitive and communicative systems.

Evidence that the brain encodes conscious and unconscious input differently could also lend credence to dual lexicon theories of decoding idioms. It is plausible that figurative language, such as idioms, requires a higher-level of conscious processing in order to comprehend and encode. This is borne out by the fact that children do not begin to understand figurative language until after the age of nine. In this case, it would benefit learners to guide them in consciously exploring idioms.

The input hypothesis is of limited use in selecting idioms for study. While it is helpful to be reminded to select idioms which are not too difficult (i+1), the natural order hypothesis is not explicit about the order in which idioms are acquired. How does the order of acquisition apply to vocabulary and idioms? Some things may be generalized from other morpheme orders. It may be supposed that idioms made of compound nouns would be acquired before phrasal verbs which in turn would be acquired before passive idioms. However, this presumes

that idioms are encountered along with other speech as the learner passes through these stages. For high-frequency idioms this may occur. However for most idioms, it must be remembered that, taken individually, idioms do not occur frequently and that the majority of idioms will be learned after the learner has reached an advanced stage of acquisition. That the learner would need to repeat these stages through idioms acquisition seems implausible.

One distinction with vocabulary versus grammar is not only the complexity of the morphemes, but the complexity of the referent concept. Some idioms are more abstract or more culturally specific than others.

Does it matter how abstract or unfamiliar the concept behind an idiom is? Some care may be needed to prevent an ordered approach from resulting in over-generalization about the nature of idioms based on less marked forms. It may be desirable to include some marked input. Reportedly, studies of French English speakers exposed to possessives of nonhuman (unmarked form) objects as well as human (marked form) objects found that "students who had been exposed only to marked data improved more than students who had been exposed only to unmarked data in both the marked domain and the unmarked (nonhuman) domain" (Zobl, 1985, as cited in Larsen-Freeman & Long, 1991, p. 320).

A further drawback of the Monitor Model is, as a result of natural acquisition without instruction, learners will not necessarily be aware that they have learned an idiom or recognize when they are using one. Some study of idioms may help learners to understand the distinction between idiomatic and literal speech and make inferences about the distinguishing features of idioms, which may promote their extracurricular acquisition in the future. There is some evidence that learning can contribute to acquisition. There are also detractors of this belief, chiefly Krashen himself who held that learning detracts from acquisition. However, Krashen also was not speaking specifically of idioms, but general language acquisition. In fact, however, even native speaking children learn idioms more quickly when figurative language is modeled in the classroom. Thus, idioms are a recognized component of K-6 language arts curricula and standards. The California English-Language Development Standards (ELD) regarding idioms is summarized in the following table.

Table 3. The English-Language Development Standards for California Public Schools

Level	Listening and Speaking	Reading
General	*Comprehension and Organization and Delivery of Oral Communication*	*Fluency and Systematic Vocabulary Development: Vocabulary and Concept Development*
Intermediate		- Demonstrate sufficient knowledge of English syntax to interpret the meaning of idioms, analogies, and metaphors.
Early Advanced	- Use simple figurative language and idiomatic expressions (e.g., "sunshine girl," "heavy as a ton of bricks") to communicate ideas to a variety of audiences.	- Use a standard dictionary to deter-mine the meaning of unknown words (e.g., idioms and words with multiple meanings). - Recognize idioms, analogies, and metaphors used in literature and texts in content areas.
Advanced ELD level	- Demonstrate an understanding of figurative language and idiomatic expressions by responding to such expressions and using them appropriately.	

California State Board of Education. (2002). English-language development standards (ELD) for California public schools. Sacremento, CA: California Department of Education.

So, for teachers of idioms, a key question is whether knowledge of an idiom is sufficient or if students must acquire fluency. The State of California standards clearly take different positions at different levels. Language teachers may also make such distinctions according to the level of their students and the utility of the idiom, and then apply acquisition techniques which suit their goals.

Evaluating an Acquisition Point

When can we say that an idiom has been acquired? One way to define the point of acquisition is to note its appropriate usage with reference to standards such as the California standards previously cited. These standards can be particularly useful in evaluating acquisition at the level of communicative competence.

Another view is to note "the first appearance of that form in the learner's language" (Larsen-Freeman & Long, 1991, p. 41). This method can be useful for quantifying vocabulary growth and passive knowledge. The advantage of this is it allows the learners' performance to be evaluated for improvement, rather than against native-like standards. However the emergence of a form does not constitute its mastery; it could in fact disappear from the learner's speech. Larsen-Freeman & Long (1991) report

early studies of inflection by Cazden in 1968 and of grammatical morphemes by Hakuta in 1974. Drawing on Cazden's 1968 definition, we can define the point of acquisition of an idiom as the first of three consecutive samples in which the idiom is supplied in at least 90% of contexts in which is clearly required. In addition, it is useful to note other facts as well, such as "how often it is used inappropriately" and "how learners are using a particular structure long before the learners have 'acquired' it" (Larsen-Freeman & Long, 1991, p. 41).

Language Acquisition Methods

The concept of following a language acquisition method, i.e., "a systematic set of teaching practices based on a particular theory of language and language learning", has been a driving force in refining language acquisition practices; the "quest for better methods preoccupied teachers and applied linguists throughout the 20th century" (Morrison, n.d., ¶1).

Methods versus Strategies

The systematic application of a theory is what distinguishes learning methodologies from other methods cum strategies, e.g., role-playing, discussion, or problem based learning. While a methodology may draw on various

methods, it must take a consistent theoretical position to be called a methodology.

While some methodologies are more influential than others, the fact remains that most teachers are not systematic, and instead draw on several methods to make up their own approach. Many practitioners feel that "no one approach should be used exclusively since combining approaches is usually more effective" (New Nouveau Brunswick, Getting Started section, final para.).

Historical

Early language pedagogical methods included Grammar-Translation Approach, Direct Approach, Reading Approach, and Audiolingual Method. These approaches focused on linguistic proficiency rather than communicative competence. Therefore, they have been deprecated in favor of current methodologies, including: Listening First, Communicative Approach, the Lexical Approach, and Whole Language / Content-based Instruction.

Lexical Approach

Of all the approaches, the lexical approach has the most to say about idiom and other fixed expressions and collocations. Coined by Michael Lewis (1993), the lexical approach "concentrates on developing learners' proficiency with lexis, or words and word combinations. It is based on

the idea that an important part of language acquisition is the ability to comprehend and produce lexical phrases as unanalyzed wholes, or 'chunks'" (Moudraia, 2001, ¶1). The lexical approach recommends activities "to develop learners' knowledge of lexical chains" (Moudraia, 2001, ¶8) including:

- Intensive and extensive listening and reading in the target language.
- First and second language comparisons and translation done in larger chunks than words.
- Repetition and recycling of activities, such as summarizing a text orally one day and again a few days later to keep words and expressions that have been learned active.
- Guessing the meaning of vocabulary in context.
- Noticing and recording language patterns and collocations.
- Using dictionaries and other reference tools.
- Using language corpuses to research collocations such as the COBUILD Bank of English (http://www.collins.co.uk/books.aspx?group=153) or the British National Corpus (http://thetis.bl.uk/lookup.html).

Although "implementing a lexical approach in the classroom does not lead to radical methodological changes" (Moudraia, 2001, final para.), it does validate time spent explicitly focusing on vocabulary and fixed expressions, including idioms.

Listening First

Cook (1986) dubs "the overall approach to language teaching that emphasizes listening as the primary skill" as "Listening First" (p. 31). The Listening First method subsumes more well-known methods such as Total Physical Response (TPR) and the Silent Way. "Popularized in the 60's and 70's by Dr. James Asher" (Marsh, n.d., ¶1), TPR is a useful approach with beginning level learners, because students are not required to speak initially but to respond with physical movement to various commands. Several commands are introduced at one time, gradually increasing in complexity from one word directions to longer sentences. This is a popular approach for teaching the non-idiomatic meanings of phrasal verbs. Marsh points out that TPR is limited by its over-reliance on:

- the imperative in sentence forms,
- short phrases or single words, and
- passive language skills (¶2).

These drawbacks are not a disadvantage for low-frequency idioms, for which passive recognition is sufficient. However, such commands are really only possible with verbal idioms which can be demonstrated, whereas the majority of idioms represent abstract nouns and concepts. Nonetheless, TPR is a proven method for long-term vocabulary retention.

The benefits of the Listening First method as summarized by Gary and Gary (1981, as cited by Cook, 1986) include:

- *Cognitive*. Concentrating on one skill at a time (rather than learning, listening and speaking simultaneously) is less demanding.
- *Affective*. Speaking in public embarrasses many learners; let them speak when they feel ready.
- *Communicative*. Listening is inherently communicative; the listener tries to understand the message.
- *Media compatibility*. Listening can be done more easily with technology than speaking.
- *Utility*. Students can more readily listen to films, TV, etc., than speak outside of class.

Despite the availability of new technologies, particularly for communications, such technologies are not affordable in many parts of the United States and the world today.

Moreover, the Listening First method is supported by experimental evidence (Cook, p. 32-36). While the experiments are not robust or resounding enough to show what Cook (1986) calls the "paramount importance of listening" (p. 32), they have shown the method to be efficient, a key consideration in the learning the numerous idioms in the English language. The Listening First method is suitable for learning idioms because most learners are beginners with respect to understanding idioms, even though they may be advanced in their general communication skills.

Many idioms occur just frequently enough to require learning, but not frequently enough to merit extensive study. This approach also has the advantage of shifting the focus from simply learning idioms to improving listening skills as well. Although the research is not clear about whether listening must precede production in the L1 acquisition, it is clear that putting listening first is an effective and efficient approach for learning some idioms.

Communicative Approach

The research in favor of the Communicative Approach, on the other hand, shows that comprehension is not sufficient for production and that communicative practice is needed to build communicative competence.

Some students may be satisfied with merely comprehending some idioms. However, if students desire native-like fluency in the L2 then it will be necessary to have communicative competence with idioms, such that they can also use idioms in their appropriate contexts in writing, speeches, and conversation. As shown by the Communicative Approach, each skill requires its own practice, as they build progressively on each other.

Active Engagement with Comprehensible Input

According to Krashen (1981), any teaching method is successful to the extent that it engages the learners in deeper level processing of meaningful and comprehensible input; "all other factors thought to encourage or cause second language acquisition only work when they provide comprehensible input" (p. 57). Cook points out that this theory is also supported by Craik (1973) who suggested that memory works at different levels starting with superficial phonology and progressing deeper into syntax and semantics.

What makes each method successful is not so much the primacy of any specific skill (listening, speaking, etc.), but rather the depth of engagement in it. Hence, neither listening nor speaking alone is sufficient. Rather, the goal must be active listening and authentic communication, as suggested by Gary and Gary (1981b, cited in Cook). Likewise, meaningful communication must be distinguished from mere production. The often substituted, but inferior objective of 'oral practice' is manipulative rather than communicative.

Vocabulary Recommendations

There is very little literature specifically on how idioms are best taught and acquired. Therefore, the literature on vocabulary acquisition in general is considered insofar as it can be applied to the study of idioms in particular. These recommendations are derived from the literature on vocabulary acquisition, in combination with the literature on language acquisition in general and self-regulated learning.

In reviewing the literature, answers to the following questions were sought:

1. How do learners figure out the meanings of idioms on their own?

2. How do learners remember an idiom along with its meaning?
3. How do learners remember how to use an idiom?
4. How do learners gain communicative competence with speeded tasks?

Students Should Select Idioms

How do learners figure out the meanings of idioms on their own?

Students will better remember idioms if they have selected the idioms in the first place. If this is not possible due to time, syllabus requirements, or student maturity/readiness, then at least allow students to choose which idioms to prioritize in their studies.

Provide Direct Instruction

Although context and associations may be essential to remembering idioms, definitions and paraphrases can help to clarify meanings of new words. Chall (1987) cites "considerable research evidence exists that direct teaching is highly beneficial for both" word recognition and word meaning. (p. 15) Stahl and Fairbanks (in press, as cited in Chall, 1987) found that "vocabulary instruction did in fact produce significant, although small, gains in general reading comprehension" (p. 30).

Provide Clear Definitions

Definitional method provides gradual exposure and familiarity "as one component of a comprehensive approach to vocabulary, even though such methods by themselves, cannot reliably increase reading comprehension (Nagy & Herman, 1987, p. 32). However definitions are frequently ineffective at providing meaning for unfamiliar words (Baldwin & Schatz, 1984; Sachs, 1943, as cited in Nagy & Herman, 1987, p24). "Written contexts usually supply only limited information about the meaning of unfamiliar words, and are sometimes even misleading (Beck, McKeown, & McCaslin, 1983; Deighton, 1959). On the other hand, experimental studies have often found that inferring meaning from context is less effective than more intrusive or explicit forms of instruction (e.g., Margosein, Pascarella, & Pflaum, 1982; Presley, Levein, & Delevney, 1982); in instruction, a combination of context and definitions is more effective than context alone (Stahl & Fairbanks, in press)" (Nagy & Herman, 1987, p. 24-25).

Vary Contexts and Modalities of Input

The relative merit of various approaches to vocabulary acquisition is a hotly debated topic in SLA. It is commonly accepted that context is important in the comprehension of vocabulary and idioms (Cacciari &

Levorato, 1989; Nippold and Martin, 1989), not all agree about the degree to which context helps. The primary methodological rivalry is whether students learn vocabulary better by explicit presentation of meaning or through induction and incidental learning (Schmitt, 2000).

Green and Ybarra (2003) report on an investigation by Kang and Dennis in South Korea, which showed how adding context to vocabulary words aids retention of new vocabulary items. The study assigned fifth graders to three groups. One group was only given definitions in translation, the second group was given definitions and pictures, and a third group was given a definition and the pictures only after using the word in context. Although the context group initially fared worst on tests, after a period of adjustment, they outperformed the other two groups on all tests, retaining the vocabulary knowledge longer. Kang and Dennis (1995) concluded that real vocabulary cannot be learned through studying it as isolated facts.

Periodic exposure and repetition also improves memory and familiarity with any word (Schmitt, 2000). Brain-based learning theories support strategies of gradual exposures as well as Gardner's theory of multiple intelligences. Gardner (1993,1999) argues that students need to be

exposed to information through a various mediums because the brain processes experience and information through seven or more distinct intelligences: linguistic-verbal, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal, intrapersonal, and the recently proposed naturalist intelligence. For vocabulary learning this highlights the importance of studying the benefits of multimedia appealing to all of these intelligences. Gardner noted that all of these intelligences need to be developed, however an individual's most dominant attribute needs to be recognized and given opportunity to flourish. Therefore students should be allowed flexibility to focus on their choice of exercises in the website, including oral, listening, reading, linguistic, and kinesthetic exercises.

The value of different media in this presentation is something less studied. While there are studies on particular new technologies of interest, there are few studies on the relative merits of an autonomous multi-media approach. In the case of the aforementioned fifth grade vocabulary study, the additional context was made "possible and more effective by the use of computers" (Vocabulary Development section, ¶3). Likewise, Green and Ybarra (2003) agree that "computers can incorporate

various learning strategies as well as accommodate a variety of learning styles" by providing the "context and visual clues" that students need "to help them understand" and "to become active learners in a one-on-one environment" (Vocabulary Development section, ¶1).

More frequently, there are studies on particular media such as hypermedia, a web design technology which enables teachers to gloss words they expect to be unfamiliar to their students. Though this saves students the time of looking up the word in a dictionary or translator, it may not actually promote vocabulary retention. Koren (1999) reports on one hypermedia study: "Retention of the inferred words was much higher than that of the glossed words." The catch-22 is that "When the text has many new words, students quickly despair and are discouraged…{however} …when the vocabulary of the text is more familiar, students are more likely to continue with the reading task" (Introduction, ¶1). Apparently there is a fine line between making an exercise manageable for students and making it perfunctory. According the these findings, it may be possible to overdo the popular admonition by Krashen to make language learning an incidental process; conscious effort may sharpen memory so long as the affective filter is not heightened.

It is not clear whether this applies to other vocabulary aids as well, such as online dictionaries, which require a bit more attention than a glossary but still make it much easier to look up a word. Although the popularity and ratings of online vocabulary resources speak volumes about the helpfulness of this approach, there is not much in the way of quantitative research showing results in terms of improvement.

Contextualize Vocabulary and Build Associations

How do learners remember an idiom along with its meaning?

It is important to study idioms in detailed contexts. Studying lists of idioms out of context will make it difficult to understand and remember them. This is especially important for phrasal verbs which often have more than one idiomatic meaning depending on the context. For example, "She made it out to him" (when paying a bill by check) is entirely different from "She made out with him" (in the movie theater) or "She made out like a bandit" (during a poker game). All of these are distinct from the literal interpretation of 'made' in "She made it out of pine" (discussing furniture).

The failure to interpret context has been linked to the failure to process the figurative meaning of an idiom

that also has a literal meaning. Titone, Holzman, and Levy (2002) found that schizophrenic patients did not process the figurative meaning of an idiom, if and only if the idiom could also be interpreted literally. For instance, they were likelier to get the figurative meaning of "She was on cloud nine" than "He kicked the bucket." Although the control group also showed evidence that the literal meaning was activated upon hearing an idiom, they were nonetheless able to process the figurative meaning. This indicates that both the literal and figurative meanings are activated in idioms processing, but that normally literal meanings are ignored when they don't suit the context.

Analyzing context not only helps guess the meaning, but also to later recall it. Associative memory is the bed-rock of psychology and the foundation of learning:

> One hundred years of research in psychology tells us that whenever one perceptual clue is regularly associated with another, the presence of the first will come to automatically increase attention to the second (e.g., Allport, 1989; James, 1950; Rescorla & Wagner, 1972). (Smith, 2000, p. 51)

While context is important in all learning, it is crucial in language acquisition in general and paramount in vocabulary acquisition in particular.

> Swaby (1977) found that instruction emphasizing where a new concept fits into prior knowledge was more

> effective than an approach based on definitions. Similarly, Kameenui, Carnine, and Fresch (1982) found that a technique integrating word meanings with story context was superior to definition drill. The intensive vocabulary programs of Beck and her colleagues (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983), which succeed in increasing comprehension of texts containing instructed words, incorporated instructional techniques aimed at developing both a network of semantic relationships among instructed words, and ties between instructed words and prior knowledge. (Chall, 1987, p. 29-30)

Provide Opportunities for Discrepancy and Elaboration

Bloom (2000) argues that associative learning alone is insufficient for vocabulary acquisition and is helped by affective factors such as motivation, as well as techniques such as discrepancy and elaboration. Activities should not only provoke associations, but also call attention to discrepancies and elaborate upon prior knowledge. Discrepancy motivates students to learn new words in order to

> … resolve discrepancies between what they and others have in mind. … According to the principle of elaboration, children will have to learn increasingly more of the language – its words and its syntax – in order to express and articulate the increasingly elaborated content of mind made possible by developments in their symbolic capacity and conceptual structure. (Bloom, 2000, p. 20)

Discrepancy and elaboration are particularly important for idioms which have no L1 equivalents. Possible activities to emphasize discrepancy between the

literal and figurative meanings: drawings, charades, and jokes or puns combining the literal and figurative meanings. These activities should be exaggerated to show the absurdity of the literal meanings. Potential activities for elaborating upon the meaning include: story telling, news reporting, and interviews.

Use the Literal Meaning as a Key to the Figurative Meaning

The overarching strategy is to analyze the literal meaning in order to arrive at the figurative meaning. This can serve one of two purposes – comprehension or recall. Techniques for using the literal meaning are summarized in the following table.

Table 4. Literal to Figurative Transfer Techniques

Technique:	Most Useful for:	Example:
Paraphrase	Idiomatic collocations	"Love at first sight" can be understood through paraphrases such as "Loving the first time you see"
Relate the literal meaning of individual words to experience	Semi-opaque idioms	"To be stood up" can be remembered by relating it to the experience of standing outside the movie theater while waiting for a date to appear
Interpret the literal meaning as a metaphor	Transparent idioms that contain metaphors	"Stir up a hornet's nest" (Bulut & Ilkay, 2004, p. 110)

Use Translation for Concept Comprehension

Another debate is whether translation is beneficial for idioms. In discussing academic development of ELD schoolchildren, Gibbons (1993) argues that development of children's home or first languages is crucial for cognitive development in English: "if there is a gap in a learner's language resources, then the thinking processes that are dependent on them will also be restricted" (p. 17). This observation could also apply to learning idioms with unfamiliar words and concepts – acquiring both the words and the concepts at the same time can impair the ability to understand the concept. However, if the concept can be better understood through the native language, then the idiom may be more likely to be understood the next time it is encountered, even if the learner cannot actively recall some of the unfamiliar words in it. Even in cases where the idiom is unfamiliar or illogical in the native language, it can help "if you have sorted out the world in one language, it becomes much easier to sort it out in a second language" (Gibbons, 1993, p. 6). Even when languages don't share a common metaphor used in an idiom, learners can better understand some idioms by considering how it would be expressed in their language and why its underlying metaphor wouldn't make sense. Group discussions

are a good way of reflecting on this, because: "talk allows children to think aloud, to formulate ideas, to set up and evaluate hypotheses and to reach tentative decisions in a context that is not restricted by the formal demands of written language" (Gibbons, 1993, p. 27).

Help Learners Refine their Judgments about Transferring Idioms from Other Languages

Factors in transfer of items from L1 to L2 include degree of similarity, perceived transferability, and learner proficiency. Idioms which are identical in L1 and L2 are easiest to understand and produce, while idioms that are different in L2 than in L1 are least likely to be understood or used (Irujo, 1986).

Transfer of a form can depend in part on how likely the learner is to think it may be acceptable in another language (i.e., how 'marked' its use in their own L1 appears to them) as well as their perception of the L1-L2 distance. An idiom is marked to the degree that it seems unusual, semantically opaque, and language or culturally specific. "Kellerman (1977) presented adult Dutch speakers with grammatical English sentences which contained twenty Dutch idiomatic expressions in translation, and asked them which usages they thought were acceptable in English"

(Bulut, 2004, p. 104). Students with higher levels of general proficiency were better able to identify transferable idioms. All levels were conservative in their judgments, but the lower the level, the more conservative the transfer. In 1978, Kellerman (as cited in Bulut, 2004) "tested the hypothesis that core, unmarked, meanings of a word will be transferred before others" (p. 104). To obtain the ranking of which meanings are more core than others, the judgements of 50 Dutch NSs were aggregated from their sorting of cards with sentences using the Dutch verb 'breken' (to break). Excerpts of the NSs' coreness rankings:

- He broke his leg. (literal)
- After the accident, he became a broken man. (transparent idiom)
- She broke his heart. (transparent idiom)
- He broke his word. (transparent idiom)
- His voice broke when he was 13. (opaque idiom)
- The underground resistance was broken. (collocation)

When English translations of the sentences were later presented to 81 Dutch learners of English, the judgements they gave as to which uses of 'break' they thought possible in English correlated strongly with the NS 'coreness' ranking, but not with the concrete/ abstract ranking. The same result was obtained from

> 291 learners using a subset of nine of the sentences (p. 104).

It may therefore be advantageous to help students evaluate their perceptions of which idioms can be transferred, so that they can form a comparative picture of the two languages and cultures in order to make more accurate assessments of which idioms can be transferred. Learners may benefit from discussing not only whether an idiom exists in their language, but also theories about why this idiom makes sense in multiple languages or, in the other case, why it exists in the L2 but not L1. This may be especially helpful with intermediate learners who were less likely to transfer marked uses than either advanced or beginning users, "possibly because they had committed enough errors by this stage to know that, while similar, the languages really differed in detail a great deal" (p. 104). In what ways they differ specifically, learners may gradually become more aware, perhaps leading to advanced learners again transferring more from L1 to L2. Therefore, it may help to make learners at the intermediate stage more aware of L1-L2 differences and similarities, so that they obtain better judgment about using this strategy sooner.

Begin with Most Common Idioms that are Similar in the Learner's First Language

In selecting idioms for the syllabus, the instructor should select idioms that occur most often and which seem the least marked. Concordance software can be used by students and instructors to determine how frequently an idiom is used. When selecting idioms for study and review, students should prioritize idioms which are most similar to their L1, since they will have the best chance of remembering these.

Teach Approximately Seven Idioms at Once

Hayes (1952) found that the memory span of five words when testing subjects from a set of 1,000 English monosyllables. Presumably, more complex words and idioms could be fewer. However, if we do not need students to immediately recall the idioms, but merely to recognize them, we can teach more than this, keeping in mind that errors in immediate memory are likelier to occur. Miller (1956) found that "the span of absolute judgment and the span of immediate memory impose severe limitations on the amount of information that we are able to receive, process, and remember." He reports "a span of absolute judgment that can distinguish about seven categories and that there is a span of attention that will encompass

about six objects at a glance" (Miller, 1956, Summary, ¶2).

> In spite of the coincidence that the magical number seven appears in both places, the span of absolute judgment and the span of immediate memory are quite different kinds of limitations that are imposed on our ability to process information. Absolute judgment is limited by the amount of information. Immediate memory is limited by the number of items. In order to capture this distinction in somewhat picturesque terms, I have fallen into the custom of distinguishing between *bits* of information and *chunks* of information. Then I can say that the number of bits of information is constant for absolute judgment and the number of chunks of information is constant for immediate memory. The span of immediate memory seems to be almost independent of the number of bits per chunk, at least over the range that has been examined to date. (Miller, 1956, The span of immediate memory section, para 10)

Applied to idioms acquisition, this implies that students can retain approximately seven new idioms in immediate memory regardless of the length of the idioms, each being its own chunk. Longer idioms may themselves require chunking into more familiar bits in order to be retrieved from immediate memory.

Include an Appropriate Ratio of Syntactically Flexible and Frozen Idioms

A defining characteristic of idioms is their fixed, unchanging form. However, many idioms can be transformed into the passive. For example, the idiom "to stand up", meaning "to fail to appear that the designated time", can be used in both the active and the passive voice; "She

stood him up" and "He was stood up (by her)" are both correct. However, most idioms lose their figurative meaning or cease to make sense when used in the passive. For example, the idiom "to break up", meaning "to end a relationship", does not have the same meaning when used in the passive voice; "They broke up" cannot be changed to "They were broken up". Idioms that cannot be syntactically transformed into the passive are called syntactically frozen. In contrast, syntactically flexible idioms retain their figurative meaning when transformed into the passive.

Syntactically frozen idioms are easier to learn than syntactically flexible idioms (Gibbs, 1987). This is in part due to the fact that the frozen idioms are repeated more often in the same form, while flexible idioms are used in various forms. Therefore, more syntactically frozen idioms should be used at beginning levels of idiom study, gradually leading up to more syntactically flexible idioms. However, it is important to include both types, so that students become aware of the distinction.

Provide At Least Eight Exposures to the Idiom to Promote Long Term Recognition

Of the thousands of idioms commonly used in English, it is only necessary for learners to be able use a

fraction of them. Of the remainder, some need to be at least understood, while others simply need to be recognized as an idiom so that confusion with the literal meaning does not arise. In this regard, it is of interest to know how many times a word needs to seen in order to be recognized in the future. In a study of new words encountered during reading, elementary students were tested on their recognition and not the meaning of the word. "On the immediate post test, words met more than 8 times were recognized most of the time. … However, by three months, nearly half of these gains in word-form recognition were lost" (Waring & Takaki, 2003). Words met more frequently (up to 18 times) did not show significantly greater recognition than words met 8 to 10 times, at any stage of the testing. However, words met only 4 or 5 times were approximately 40% less likely to be recognized, at any stage of testing. Therefore, for purpose of short-term recognition, an initial exposure of 8 to 10 times appears to be ideal. For long term recognition, performance also plateaued at this exposure rate. Though long-term recognition was less than 50%, it did not improve significantly with greater exposure. It is notable that the largest drop in recognition occurred between the immediate post-test and the one week post-

test, with only 65% of previously recognized words being remembered. In contrast, after three months nearly 80% as many words were remembered as recognized at one week. This identifies the period immediately after initial exposure as a potentially critical time for reinforcement (Waring & Takaki, 2003).

Provide More Exposures to Promote Long Term Comprehension of the Meaning

In order to understand and remember the meaning of a word more frequent repetition is need. In the same study of elementary readers (Waring & Takaki, 2003), a multiple-choice recognition test was given to test meaning recognition. On both the immediate post test and one-week post-tests, words met most frequently (15 to 18 times) resulted in 35% greater comprehension than words met 8 to 10 times. However, after three months the boost in comprehension disappeared for words met most frequently; words met 8 to 10 times and words met 15 to 18 times were equally likely to be remembered after three months. As in the recognition test, words met only 4 or 5 times were 40-50% less likely to be comprehended, at any stage of testing. For purpose of short-term recognition, an initial exposure of 15 to 18 times appears to be best. For long term recognition, performance plateaued at the 8 to 10

exposure rate. However, since the experiment provided no reinforcement after the initial exposure, it is supposed that the higher scores among words met 15 to 18 times might have been retained with practice.

It is notable that among words with 8 to 10 exposures, the largest drop in recognition occurred between the immediate post-test and the one week post test, with nearly 75% of previously recognized words being remembered. Words with 15 to 18 exposures likewise showed a 25% drop in comprehension over the first week, but an even greater 30% drop after three months. This identifies reinforcement over the long-term as a potential way of retaining the superior word comprehension among words with 15 to 18 exposures.

With respect to idioms in particular, Irujo (1986b,1993) likewise found that idioms require extra attention in the area of usage since their usages are typically more restrictive both in form and context. Students require this repetition at various speeds and according to their own previous familiarity. The degree to which these findings can be generalized to other areas of vocabulary acquisition and idioms acquisition in particular will require further study.

Provide Opportunities for Authentic Production

Contemporary methods generally agree that "activities are also needed which provide opportunities for production of comprehensible linguistic output." In this respect, a hypertext idioms site for ELLs was evaluated as lacking due to the fact that: "Activities, such as the ESL idioms, in which learners' output consists solely of mouse clicks, contain no such opportunities" (Chapelle, 1997, p. 26).

Provide Reinforcement Opportunities on an Ongoing Basis

How do learners remember how to use an idiom?

The period immediately after initial exposure was identified as a time when word recognition most deteriorates. For word comprehension, deterioration occurs over a longer period. For the purposes of recognition, simple games involving the words are sufficient to reinforce recognition. However, to promote comprehension it is necessary for the activities to interrogate the learners' understanding of the words. Many teachers suggest making a few sentences with each new vocabulary item. However, this is only effective if students have a good understanding of how to use the vocabulary, which is often not the case with idioms. In this case, the reinforcement must help to elaborate on the meaning of the

idiom. One solution may be to recode words in idioms into larger chunks: “By organizing the stimulus input simultaneously into several dimensions and successively into a sequence or chunks, we manage to break (or at least stretch) this informational bottleneck.”

Teach Idioms as Chunks of Language

Two aspects of idioms make their acquisition radically different than other vocabulary. One is the fact that their meanings cannot be understood on the basis of their parts. The second is that they do not conform to the same transformations in grammar as other units of language. There are no rules for knowing whether an idiom can be used in a different tense, or in the passive voice, etc. The generative view of English grammar popularized by Noam Chomsky holds that "the meaning of a sentence is calculated on the basis of its parts. The normal method of construing the meaning of the sentence is compositional: we combine the meanings associated with the words, phrases and syntactic configurations contained in the sentences" (Haegeman and Gueron, 1999, p. 494). Yet even generativists admit that "sometimes compositionality is not fully respected" (p. 494). Idioms are such as case, according to Haegeman and Gueron (1999): "In a sentence containing an idiomatic element, the interpretation of the

sentence is not fully determined by the interpretation of its parts" (p. 494). For example, the idiom 'kick the bucket' has no apparent reason for meaning 'die'.

> The effect of movement operations on idioms chunks is also not predictable; some idioms retain their idiomatic reading under passivization (break the ice), others don't (kick the bucket). We can say both "John broke the ice" as well as "The ice was broken by John." However, although we can say "Mary kicked the bucket", the idiomatic meaning is lost in saying "The bucket was kicked by Mary. (Haegeman & Gueron, 1999, p. 497)

Therefore, once students are introduced to a new idiom, they may not be certain in which ways it can be used. In order to be fluent, they will need elaboration with additional examples of acceptable usage and discrepant usage. This will require significant additional study time per idiom for the student, and preparation by the instructor. Moreover, there is a lack of documentation about idioms and how they work. Total fluency with every idiom is not worth the amount of study time. It is often sufficient that students be aware that idioms can change in form.

Practice Vocabulary within each of the Four Skills

The four main skills in language learning are listening, speaking, reading, and writing. Conventional wisdom held that practicing each skill discretely is most effective. Entire methodologies such as TPR center on a

single skill at a time. One advantage of this is it is easier to assess proficiency at each skill distinctly, identify deficiencies in a skill area, and prevent avoiding one skill in favor of another.

Practice Vocabulary with Integrated-Skills

Other methods stress integrating all four skills in activities. For example, the whole language movement prominently promoted this method. "Listening, speaking, reading and writing are not totally separate modes of communication, but are interdependent and should, where possible, be combined in activities that develop all four skills" (Ashworth, 1992, p. 68). The benefit of this for learning idioms is making mental connections between various modes of information, so that idioms are not mentally compartmentalized into spoken idioms versus written idioms, etc.

Provide Opportunities to Practice the Vocabulary in Authentic and Meaningful Contexts

How do learners gain communicative competence with speeded tasks?

Authentic practice is an imperative component in nearly all contemporary language classrooms. Mandated by Krashen's Monitor Model, the importance of authentic practice is also recognized as important in subjects other

than language learning because authentic situations and problems are perceived as more relevant or potentially relevant, thereby boosting attention.

> Relevance is determined by the things children care about in the real world and provides the direction for word learning, determining the words children say and understand and thereby, the words they learn. Relevance according to Sperber and Wilson (198, p 46) "is the single property of that makes information worth processing." (Bloom, 2000, p. 19)

It is not sufficient to provide connections to prior knowledge and context.

> A model of language that encompasses language content and uses as well as linguistic form means that language will never be acquired in the first place without *engagement* in a world of persons, objects, and events. (Bloom, 2000, p. 26)

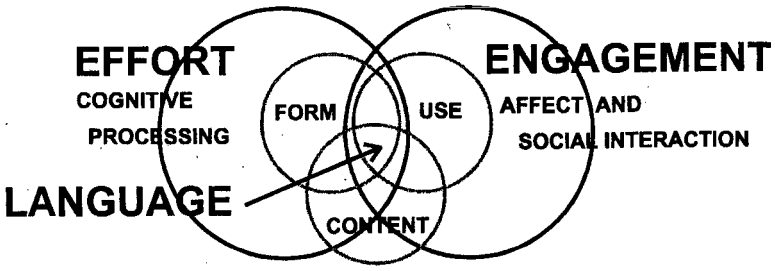


Figure 1. Intentionality Model of Second Language Acquisition

Bloom, L. & Tinker, E. (2001). The intentionality model and language acquisition: Engagement, effort, and the essential tension. *Monographs of the Society for Research in Child Development, 66.*

A key to authentic practice is creating a relaxed atmosphere which enables students to take risks. Some possible activities are in given in the following table.

It is especially important to orally practice idioms which are similar in L1 but somewhat syntactically different, making interference errors more likely.

Table 5. Activities for Authentic Language Practice

Role playing	Assign learners roles in life-like situations; explore and refine appropriate language choice for social situations
Simulations	Provide an advanced problem for role-play and information needed for the solution
Problem solving	Share information to solve a problem; not as complex as a simulation
Information transfer	Translating information in one form, such as on a graph, calendar, or chart, into another form, such as a written paragraph or an oral story
Information gap	Learners ask and answer questions in order to complete a joint task. For example, they could each have different papers containing pictures or words which they do not show to the other person. They must ask questions to each other to find out the missing information.
Games	Reinforce learning and to give a change of pace
Singing	Word stress falls on the accented notes of music, and words must be sung quickly in phrases. Cloze exercises can be used to practice vocabulary in the songs.
Chants	Useful for pronunciation and stress practice.
Comparisons	Share material about their homeland. Make charts to compare aspects of their own culture and language with other students' cultures as well as the target language and culture.

Set Priorities: Receptive or Productive Knowledge

What does it mean to know the meaning of an idiom? In vocabulary acquisition theory, "the usual distinction is between active knowledge (knowing how to use the word) and

passive knowledge (understanding the meaning of the word)" (Koren, 1999, Introduction, ¶5). For learners, "the second, weaker type of knowledge or words is [sufficient] since they are usually not required to use the words actively in their reading comprehension tasks." The same has been said for idioms as they relate to listening comprehension tasks. As Koren (1999) reports about vocabulary acquisition, "the connection between vocabulary knowledge and success in reading comprehension tests has been shown in many studies, such as Bossers (1992), Coady (1993), and Grabe and Stoller (1997)" (Introduction, ¶1). Likewise, it is posited that there is a connection between idioms knowledge and success in conversational listening tasks.

It may be useful for learners to aim for productive proficiency of idioms used with the highest frequency. For instructors, it may not be necessary to prescribe for every idiom whether it should be acquired at a receptive or a productive level of proficiency. If it is necessary to assess student progress, it may be most helpful to test students on a very large number of idioms, but set the target for passing at a fairly low percentage.

Select Idioms for Communicative Competence

What determines whether an idiom is useful or necessary? For example, how useful is the idiom "to bring up something (for discussion)"? To answer this, consider some related questions: How often is the idiom used in American English? Can other words be used instead with similar clarity and ease? Are the idiom and the potential synonym similar in usage and register? In the case of our example, "bring up" occurs frequently in conversation and media, less so in academic writing. We could instead say "this raises another issue", but "raises" has a more formal register than "brings up". So, learners need to understand the idiom "bring up", even though it is not essential that they use it to communicate the intended meaning. Compare:

> What time are you planning to turn up? (informal)
> Please let us know when you plan to arrive. (formal)
> Just keep on till you get to the crossroads. (informal)
> Continue as far as the crossroads. (formal)
> (Swan, 1980/1995, p. 243)

The need for receptive knowledge, but not communicative competence applies to many idioms, perhaps the majority of them.

Are there idioms which occur frequently and are essential for easily communicating the intended meaning?

Certainly, just a single example is the idiom "to run into" as in "I ran into your sister at the supermarket." This idiom is common in American English and clearly useful, particularly because the literal meaning of "ran into" (i.e., collided with) is plausible and confusing in situations where this idiom is used. For communication, this idiom is also essential because alternate wordings for the idiomatic meaning are cumbersome and unduly formal for ordinary conversation, i.e., "I unexpectedly saw your sister at the supermarket."

Fortunately for English language learners (ELLs), native speakers use fewer idioms with non-natives. "NSs employ a more restricted range of vocabulary in speech to non-natives, as measured by type-token ratio (Arthur et al., 1980), with idiomatic expressions impressionistically occurring less often (Henzl 1973, 1975, 1979)" (Larsen-Freeman & Long, 1991, p. 119-120). Since many idioms commonly used by native speakers (NSs) are easily avoidable and in fact subconsciously avoided by NSs, it is not necessary for non-native speakers (NNSs) to obtain total fluency with idioms which are easily paraphrased. Basic recognition of the idiom will allow recognition that an idiom is being used in order to invoke clarification skills and have a basic idea of the idiom's lexical area

and its positive/negative connotations. Gradually the meaning of the idiom will become clearer through occasional usage. This method places greater emphasis on gaining basic familiarity with many idioms rather than fluency with fewer, in order to make best use of extracurricular opportunities and more rapidly expand idiomatic vocabulary.

The alternative, focusing on fluency of a few idioms, is appropriate for the most essential of idioms. Which idioms are essential? -- those that cannot be easily paraphrased, those that are very common, euphemisms and other idioms people may be uncomfortable phrasing literally, etc.

This is not to imply that for all idioms we can decide whether it is desirable for the learner to have communicative competence or merely linguistic proficiency. Although some idioms are obviously essential for common situations, for others, the need for communicative competence will depend on the learner's goals.

Provide Opportunities for Self-expression

The connectivist model proposed by Chomsky and others explains vocabulary acquisition in terms of the neurological architecture and functioning of the brain. Likewise, "Hirsh-Pasek and Golinkoff's coalition model"

"word learning principles operate in conjunction with pragmatic cues from the context" (Bloom, 2000, p. 21). Bloom suggests that both models miss the "internal components" by focusing on the "mapping problem", i.e., "how children attach the form of language to concepts and objects, events, and relations in the world" (p. 21-22). Bloom (2000) says "Language exists in a society to embody and make public our intentional states – the goals and plans, beliefs and desires, and the feelings we have that are themselves unobservable but that determine how we connect to one another in everyday events" (p. 21-22).

Use Technologies which Promote Competence

Computers are quite easy to use for learning methods favoring accuracy and receptive knowledge: "One of the features of many CALL programs is that the students have to type in exactly the answer the computer expects, since the computer can only accept the answers it has been programmed to accept. This limitation can in practice be very useful, since it provides a motivation for the student to use the language as accurately as possible" (Hardisty & Windeatt, 1989, p. 10). On the other hand, learning methods favoring fluency are comparatively difficult to implement with computers. "Tests are devised to measure what the learner knows and does not know of the

target language. A subject's performance is measured against that of target-language speakers. In this sense a test is normative. A task is devised to reveal what a learner knows: 'the rules he is using and the systems and categories he is working with' (Corder 1981, p. 60) Tasks require greater levels of software complexity, resources, or even artificial-intelligence. "Thus for example the choice in a recognition procedure will be based upon what learners at that stage are known, believed or may be predicted to do. The contexts for productive elicitation exercises will be selected to elicit lexical items or syntactic forms which learners have already produced or may be predicted to produce in such contexts" (Larsen-Freeman & Long, 1991, p. 41-42). This requires more time, consideration and skill on the part of the instructor-designer. If fluency involves using the idioms in conversation, the computer could serve the role as a medium (voice-chat) or as an interlocutor (AI robot or scripted prompts and responses). In either case, this is difficult to prepare. A third method is to use the computer as a tool within other group activities. This is discussed later under the Tool Software section.

Self-regulate Online Learning

Introduction

Guided autonomous learning – is it an enigma? Is it just another code word for a constructivist approach? Certainly on face value, the overall lesson is essentially a student-centered project. The question that goes beyond this is will students buy into the concept that they can also learn on their own -- without the teacher managing their progress. The point is not to convince them to forgo using a teacher, but rather to enable them to learn even when they are without one. In fact, a good supplement for autonomous learning would be to hire a tutor to help them with their questions or a set up a special club or class to work together. The point is not to teach them how to learn alone, but rather to make them believe they can take control of their own learning.

How can they get it in such a short time? Conventional wisdom is that autonomy is not something that can be taught in a few lessons. However, little has been said about students' attitudes toward autonomous learning.

Who They Are

Who can be an autonomous learner? Is autonomous learning suitable for everyone?

Due to physical separation, online learners are required to study with a significant degree of autonomy. Even those who are supported by classes or tutors must make choices about how to spend their study time and organize their efforts. Generally, the skills and experience needed to pursue autonomous learning do not come naturally to most students. Therefore, only a moderate degree of autonomy is expected of young learners. While it is possible for children to learn to be autonomous, their self-awareness and experience regulating themselves is usually not adequate to the task. They require significantly more instructional scaffolding to prepare them for autonomous tasks. However, as learners mature into young adults, the degree of autonomy expected of learners grows considerably. In adulthood, many are left unsupported by institutions and are by default entirely autonomous. Many are not suited to this and are unsuccessful as autonomous learners. This study is primarily interested in how to prepare those adults and young adults for greater degrees of autonomy and concurrent success in their acquisition efforts.

Who Supports Them

An important caveat is autonomy need not be equated with isolation. In fact online learners can be supported in a variety of ways. In one innovative approach, Gardner and Miller (1997) describe and evaluate the development and implementation of five self-access centers in Hong Kong universities. He evaluates whether the centers helped the learners improve their English language skills. He uses both qualitative and quantitative research methods in order to get both a comprehensive view of the centers effectiveness and a detailed view of contributing factors. The centers themselves however are not his key focus, but rather the people who form them. He describes the various perspectives of users, tutors, managers, and support staff on how they use the centers and how the users feel about learning autonomously.

Why Technology

Technology enables students to share materials more easily. Other students can benefit from each others products at their own leisure. Computer based learning approaches improve student achievement, save student and teacher time, and improve student attitude toward school and particular subjects (Thompson, Simonson, & Hargrave,

1996, p. 42). Zhang and Nunamaker (2003) cite the following benefits of online learning:

- The time and location flexibility promotes the just-in-time availability of information.
- Learners and their employers save time and money, particularly travel expenses.
- Self-paced and individualized learning leads to more active participation of learners (Beam and Cameron, 1998; Burgsthaler, 1997, as cited in Zhang & Nunamaker).
- Physically separated learners and experts are connected to form an online collaborative learning community (Hiltz and Benbunan-Fich, 1997, as cited in Zhang & Nunamaker).
- Learners perceive greater opportunities for communication with instructors (Hiltz and Wellman, 1997; McCloskey, Antonucci, and Schug, 1998, as cited in Zhang & Nunamaker).

Moreover, the Internet has a wealth of information for free if students are prepared to find and use it. Clearly a lot of the success will still depend on the guidance available to the learner.

What is Autonomy

The difficultly of assessing whether a particular autonomous learning practice is successful is not merely logistical, but also inherent in the confusion about what autonomous learning is. According to Benson (2001), there are many competing definitions of autonomy. In his view, a weak definition of autonomy equates it with learning independently or in isolation. However, as he points out, this does not have to be the case, as it is meaningful to discuss students working autonomously while still collaborating with others. A stronger concept of autonomy has developed hand in hand with technologies which support it. In the history of the concept, the problems and benefits of autonomy were synonymous with the problems and benefits of distance learning. As technology has come to allow real-time communications across vast distances, isolation and independence are no longer key features of autonomy.

A stronger definition of autonomy is phrased more positively in terms of learner attributes, subsuming the concept of *self-regulation*, i.e., the ability of the learner to control his or her own learning. In theory, this could mean being able to control all aspects of learning ranging from content focus to pacing. In practice

however, autonomy is not all or nothing, and there exists a continuum of behaviors which are consistent with the principle of autonomy.

Although self-regulation is essential to the concept autonomy, it is not sufficient to define the concept (lest they be synonymous). In fact, it is possible for a learner to be influenced by multiple sources of regulation; for example, students can regulate themselves, while at the same time being regulated by a teacher. The degree to which one is autonomous is not only the degree to which one can regulate oneself, but also the degree to which one is lacking external regulation.

Note that the value of *external* regulation is case-specific – it can be useful or detrimental. Therefore, it is neither better nor worse to be more or less autonomous, but simply an attribute of the situation in which learners act. Generally, autonomy is beneficial to the extent that one is free to regulate learning as best for oneself, yet autonomy is detrimental to the extent that a student is incapable of making good determination in absence of external guidance.

In summary, the following definition of autonomous learning was found to be most neutral and accurate in describing the condition of online learners: learning

which occurs in absence of external regulation. The degree to which learning is autonomous is the degree to which external regulation is absent.

Practices Supportive of Autonomy

In Benson's (2001) evaluation, the effectiveness of practices associated with autonomy can be supported by a variety of technologies. Like the rest of education, technology based approaches to technology have gone through three major phases: behaviorist, communicative, and integrative. In his assessment, behaviorist assumptions about language learning being based on habit formation were not supportive of autonomy. Nonetheless, applications encouraged some choice by allowing students to chose the order and pace of the programming, and by allowing the user to "try again" on wrong answers. Communicative applications, consistent with a cognitivist approach, consisted mainly of tools such as publishing tools and databases, which were not designed for language learning, but could be used to that end. This allowed a great deal of control over text creation, interpretation, and manipulation. The integrative phase has been "characterized by the use of multimedia, hypermedia, and interactive technologies to promote integration of skills.' The use of branching options has allowed users

more choices and encouraged students to explore resources, rather than one-size fits all texts. However, there is often little opportunity for student creativity.

Paris and Byrnes (1989) are more optimistic about how student self-regulated learning can be developed or taught using a constructivist model. Their definition of a self-regulated learner as one who has "positive expectations, motivation, and diverse strategies for problem solving" is reflective of constructivist practices which include: construction of knowledge, comprehension and higher order learning. They outline the processes used by a self-regulated learner to include: monitoring, reflection, testing, questioning and evaluation.

Many of the methods used to increase motivation are largely teacher-dependent. A review of the literature reveals a few popular methods of boosting intrinsic motivation which are teacher independent. These include:

Problem-based Learning

One popular approach to motivation is problem-based learning (PBL). In PBL, instruction begins with presentation of a problem, usually with a fixed answer, which students must discover. PBL is popular in academic disciplines because it is well suited to exploring a topic in depth, a feature which makes it beneficial for

vocabulary acquisition which also depends on rich context, associative learning, and elaboration techniques. Other benefits of problem based learning include:

- Authentic problems capture student interest.
- Open-ended problems allow broad exploration.
- Builds experience seeking and applying knowledge towards resolving a problem.
- Meaningful tasks emulate the workplace.
- Learning is active rather than passive.
- Student interaction forms a rich learning field.
- Immediate reinforcement provided from group discussion and instructor feedback.
- Students identify the learning issues, with the guidance of the instructor (Ommundsen, 1991, p. 31).

In setting up a case problem, Ommundsen (1999) suggests the following sequence of events:

- Formation of small groups of 3-5 students.
- Presentation of problem. Emphasize authenticity of problem.
- Group brainstorming for 15 minutes of solutions.
- Provision of feedback, including discussion of hypotheses, and soliciting questions about the

case from students. This can iterate back and forth between group discussion and class discussion. New hypotheses can be added to the previous list.

- Submission of a report employing their knowledge of the case (p. 27-28)

Tool Software

Tool software is software which can enhance the teaching and learning process in all subject areas (Sheingold, Hawkins, & Kurland, 1984, as cited in Thompson et al., 1996, p. 42).

Wachman (1999) discusses software that can help teachers and learners to construct an autonomous approach to language learning. He distinguishes between two types of software: authorable and authoring. In essence, authorable software is software which can be customized to meet learning needs. For example, one authorable software described called Eclipse allows the user to import any story (via scanning or typing) to use with its tools. Authoring software is software for designing educational materials. The best feature of most multimedia authoring software is its user-friendliness and quick learning curve. Authoring software can be used not only by teachers for creating materials, but by students for adding to

them. In a study of two Israeli 9th grade science classes, most students favored building their own computer simulations using science concepts over other homework activities. Moreover, they appreciated its role in helping them be more responsible for their own learning (Ronen & Eliahu, 1999).

Consider how these concepts can be extended to the realm of tutorial learning online. Using suitable web authoring software, it would be possible to create a web-template for a themed tutorial to be explored by students and then used in conjunction with the authoring program for the games and activities to create their own materials on other themes. One such software for the creation of online games and activities, called Hot Potatoes, meets the discussed criterion of user-friendliness as well as offering many features which can benefit language learners. Such an approach would maintain attention through interactivity and active learning. It would build in relevance by allowing students to develop web learning materials on themes of personal interest. It will build confidence in their learning abilities in the truest ways – not via praise, but rather the accomplishment of developing their own learning materials. Finally, it will engender satisfaction if it is structured so that students

set their own goals for their online materials and students are guided to meet those goals or revise them.

Authoring software also provides a way around an inherent conundrum of constructivism within instructional design -- how can a design include a common set of outcomes for learning if each individual needs to construct their own knowledge? Moreover, the constructivist imperatives for flexible exploration and facilitative systems require far greater computer skills than a more prescriptive tutorial approach. Fortunately, reconciliation is attainable through the use of web authoring program. By using an objective tutorial as a model for student constructions on their own topics, some common learning outcomes can be stated at the same time as modeling learning skills, layouts, and tools for individual knowledge construction.

The latest addition to tool software is web blogs. "Often described as a kind of public journal, the weblog is usually motivated solely by the need for self-expression, and often communicates something about the personality, or adopted persona, behind the blog, through the style of writing and the choice of topics. … The weblog's ability to accommodate multiple authors provides more dimensions and generates a different kind of discourse than the

traditional journal" (Ward, 2004, p. 2-3). In the sense that they provide for both asynchronous yet interactive communication, weblogs provide a unique arena in which to practice newly acquired language. Ward (2004) cites the following benefits of weblogs: genuine audience, authentic communicative content, process driven composition, peer reviewed writing, and less anxiety than in face-to-face communication. Drawbacks include superficial reading, sloppy writing, poor netiquette, and security issues. In a study of 40 English language learners (ELLs) in a writing class, Ward further reports that approximately two thirds of the class preferred writing the weblog to the more traditional written journal. Moreover, most students were proud enough of their blogs to share them with family and friends. If the purpose of choosing a blog is to provide students an opportunity to reach out beyond the classroom community, then is important to choose a blogging community which has a significant number of users with a range of interest. Live Journal, with 23% of the market (Bauer, 2004), has categories of interests bloggers can explore, and blogs can found by keyword search.

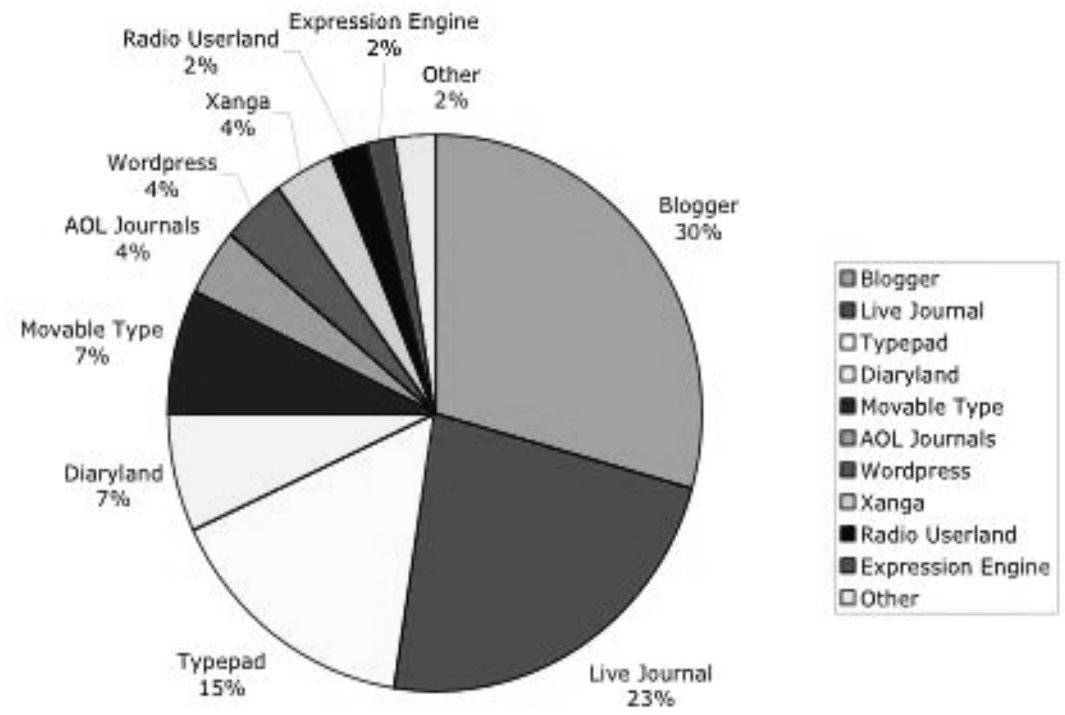


Figure 2. Market Share of Blog Communities

Bauer, E. (2004, August 6). An overview of the weblog tools market. Retrieved June 1, 2005, from http://www.elise.com/web/a/an overview of the weblog tools market.php

Learning Communities

The distinguishing feature of blogging from other tool software is the community of people sharing ideas. The presence of community is a powerful motivator. Murray

(1999) studied 23 French second-language learners as they worked independently with an interactive video program.

> The learners' experiences demonstrated how highly reliant language learning is on situation and context, suggesting that we learn a language by becoming members of a community of practice… Being a member of a community means getting to know people, engaging in activities, and having a physical space as well as an identity within that community. (p. 192)

Motivational Design: Keller's Model

Accepting the existential belief in personal agency along with the Deweyian notion about active learning preceding passive knowledge, it follows that students cannot be taught what they lack the motivation to learn in the first place.

Motivational design is not simply about motivating learners attitudinally to persevere or pay attention, but also about simultaneously improving the quality of their knowledge constructs and their ability to access that knowledge.

Despite the critical differences among learners and between various learning preferences, tutorial designers can draw on the advantages of each of these methods in creating more motivational instruction. One such model incorporating elements of all of these in a systematic framework is Keller's ARCS model. Keller was first to

clearly distinguish between the role of motivation in affective versus cognitive domain. Keller describes the ARCS model which stipulates four key categories of motivational design including attention, relevance, confidence, and satisfaction as a part of a ten step design process (ARCS, n.d.).

Attention

According to Keller and Litchfield (2002), the keys to maintaining attention are "perceptual arousal", "inquiry arousal", and "variability" (p. 92). The primary method of generating variability is through individualization, to be discussed in detail later. Individualization strategies include: dynamic content, interactivity, feedback, remediation, active learning procedures, and alternative extension activities. Attention is better maintained when content is found dynamically in response to individual student's inquiry based upon personal curiosity and interests. In cases where such flexibility is not possible, the next best thing is content which is interactive, therefore appearing less static.

Likewise, perceptual arousal can be stimulated through activities educing active learning techniques. Active learning through gradual exploration of material in

greater detail keeps the mind continually engaged with new questions and insights into the subject matter. Finally, tactics for invoking perceptual arousal are variable with the technology in question, but generally could include the use of highlighting and emphasis on key ideas as well as regular feedback, which provides not only remediation, but also questions and lines of further exploration.

Relevance

According to Keller and Litchfield (2002), the keys to promoting relevance are "goal orientation", "motive matching", and "familiarity" (p. 92). It is worthwhile to consider that relevance is not merely personal, but also socially constructed. In 1897, John Dewey (1897) advocated that education "must begin with a psychological insight into the child's capacities, interest, and habits", but also that "if we eliminate the social factor from the child we are left only with an abstraction" (Article I, ¶7). He therefore recommended translating these interests and capabilities into social terms. Learning only occurs insofar as students sees its relevance to themselves, but no student should be encouraged in self-centered, shallow interests. Motivating should not be confused with catering to student interests, an occasional pitfall of the quest to add relevance. The alternative is to elaborate upon

student interests, by appealing to their desire to actualize themselves and be accepted by their peers. In his "My Pedagogic Creed", John Dewey (1897) writes: "To humor the interests is to substitute the transient for the permanent. The interest is always the sign of some power below, the important thing is to discover this power" (Article IV, ¶7).

In practice, motivation can be built not only by catering to individual interests, but building interest in any topic by eliciting experience from students' individual backgrounds. Aside from individualization, other methods of making learning relevant include: problem-based learning, case-based learning, situated learning, and appealing to instrumental/integrative motivations.

Instrumental versus integrative motivation. "A learner is said to be integratively motivated when the learner wishes to identify with another ethnolinguistic group" (Larsen-Freeman & Long, 1991, p. 173). Learners are said to have instrumental motivation when they are "motivated to learn an L2 for utilitarian purposes, such as furthering a career, improving social status or meeting an educational requirement" (Larsen-Freeman & Long, 1991, p. 173).

Integrative motivation is generally considered to be superior to instrumental motivation for the persistence and attention needed for language learning. The ease with which children learn foreign languages is frequently taken as a case in point. "Mowever (1950) attributed a child's success in acquiring an L1 to the child's quest for identity, initially with members of the child's immediate family and then later with members of the larger speech community" (Larsen-Freeman & Long, 1991, p. 173).

However, even proponents of integrative motivation have had to recognize the value of instrumental motivation in light of research showing that it is extremely effective among both foreign and second language learners. Instrumental motivation is often stronger than integrative motivation in both second language and foreign language settings. In second language (ESL) settings, learners have an urgent need to use English in order to meet their basic needs. In foreign (EFL) settings, learners may have no immediate need for English but need it for future career goals. In such cases, it is important to make the most of instrumental motivation by "keeping an eye on the prize". In a study of ELLs in India, "students with instrumental motivation outperformed those with integrative motivation on a test of English language proficiency" (p. 174).

Confidence

According to Keller and Litchfield (2002), the keys to confidence are identifying 'learning requirements', 'success opportunities', and 'personal control' (p. 92). The problem of building "positive expectation for success" (p. 92) is complicated as it relates to the learners feelings of self-competence and the learners' locus of control on a given issue.

Locus of control. According to Paris and Byrnes (1989), another key theme of constructivism is the "intrinsic motivation to seek information" (p. 172). The distinction between internal and external motivation is important in motivating autonomous learners. In particular, intrinsic motivation (doing something without reward) is more essential to autonomous learners, because they are often less supported by extrinsic supports for their motivation. Paris and Byrnes (1989) define a theory of self-competence, which is usually lacking in learners with regards to idioms, regardless of their other English skills. Self-confidence is constituted by these aspects: ability (often assessed from praise and later by comparison as children get older), agency (often associated with prior success, opportunity to observe and successfully emulate behaviors), and control (defined

through interaction). Software which promotes these elements may increase users' feelings of self-competence.

Credibility and the theory of effort. The theory of effort states that as children mature, they learn to make a critical distinction between effort and ability. As young adults, this distinction hardens into beliefs which can be detrimental to their long term motivation. The first two are easily understood in their explanation by Paris and Byrnes (1989):

- The "self-serving effect" in which "students develop a tendency to accept responsibility for their successes while blaming failures on other people or external circumstances" (p. 179).
- "Learned helplessness" in which "students give up trying to control their outcomes when they believe that further effort is futile" (p. 179).

However, the other two learner tendencies are rather counter-intuitive:

- In some cases, "instructional dynamics" and environment such as praise can cause an increase in confidence, but a simultaneous decrease in effort.

- In other cases, “provision of assistance” has been correlated with a reduction in confidence (p. 179).

To support these notions, they cite work in which "Pintrich and Blumenfeld (1985) found that teacher's praise was highly correlated with students’ self-perceptions of ability but not effort at second and six grade. Work criticism was highly correlated with their effort” (p. 179). The reduction in confidence he attributes this to the fact that “as their concepts of intelligence change and they differentiate effort and ability, teacher assistance becomes a negative indicator of ability” (p. 179) if it is perceived that the teacher would mostly help those who are less competent. Typically, this perception is in fact accurate.

Satisfaction

Larsen-Freeman and Long (1991) report that Strong contends that “motivation does not necessarily promote acquisition, but rather results from it: those who meet with success in second language acquisition (SLA) become more motivated to study” (p. 175). Similarly, Keller’s ARCs Model takes the view that satisfaction is one component in sustaining motivation. According to Keller and Litchfield (2002), the keys to satisfaction are

intrinsic reinforcement, extrinsic rewards, and equity (p. 92).

The advantages and drawbacks of reinforcement and rewards have been discussed in the section on behaviorism; however Keller puts a different spin on what constitutes a reward or reinforcement. In the case of building satisfaction, reinforcement could consist not of positive feedback or "tangible" rewards, but rather in opportunities – that is, opportunities to use the newly acquired knowledge. Moreover, satisfaction can be engendered not just in the end, but throughout the learning process through the setting and revision of goals and self-assessment.

Set Goals

Gardner and Miller (1997) emphasize the need for autonomous learners to use special goal setting measures, not customarily required in traditional learning settings. "Goals motivate people to exert effort necessary to meet task demands and persist over time. Goals also direct individual's attention to relevant task features, behaviors to be performed, and potential outcomes … Self-evaluations of progress strengthen self-efficacy and sustain motivation" (Schunk, 2001, p. 1).

In general, this can be extended to other aspects of learning as well, such as learning strategies. Citing work from Bolhuis (1996), Corno (1992), and Leal (1993), Mardziah Abdullah (2001) states that in self-directed learning teachers must "scaffold learning by making learning 'visible.' They model learning strategies and work with students so that they develop the ability to use them on their own" (p. 1). Making students aware of not only what they learn, but how and why they learn requires a new kind of instruction which models not only content, but also thinking skills and opportunities for self-reflection.

Specific recommendations include:

1. *Make a study plan.* Gardner and Miller (1997) cite the central role of making a study plan, student and tutor attitudes towards making a plan, and the difficulty of knowing how to make a plan.

2. *Set long-term goals.* It need not be that the content is immediately useful or transparently motivational. The utility may be to achieving some future goal of the student's; the more students are helped to see those, the more satisfied they will feel, in turn boosting internal motivation.

Learning Theories

Attitudes are thought to have three components: affective, cognitive, and behavioral (Zimbardo and Ebbesen, 1970, as cited in Thompson et al., 1996, p. 58). The major learning theories of our times can each be seen as accentuating one of these areas. On the one hand, they provide consistency (in progress towards our chosen purposes). On the other hand, they encourage variety (through familiarity with a range of methods). Despite the impracticality of a grand unified theory of how education works, our teaching practices are nonetheless rooted in deeper beliefs about the nature of education. Contemporary advocates for autonomous learners tend to favor constructivist methodologies. In fact, constructivist methodologies are quite supportive of autonomy, as here defined. However, that need not mean that constructivism is the only pedagogy which is supportive of autonomy with online learners. In fact, previous learning theories, including behaviorism, cognitivism, and existentialism, are also useful for autonomous learning. The following sections will identify the contributions of each of these theories to online learning.

Behaviorism

Although there are several variants of behaviorism, as a general philosophy behaviorism is based upon the classic principle of association between a stimulus and a response. Behaviorism developed out of the positivist perspective recognized as early as Aristotle in his essay "Memory". Mergel (1998) summarizing Good and Brophy (1990) says: "The theory of behaviorism concentrates on the study of overt behaviors that can be observed and measured" (p. 2). Behaviorists add to these observations their belief in the natural process of conditioning. Conditioning is a process by which a stimulus is associated with an automatic response. On the surface, this is the antithesis of motivation. Thorndike's

> …law of effect' stated that when a connection between a stimulus and a response is positively rewarded it will be strengthened and when it is negatively rewarded it will be weakened. Thorndike later revised this 'law' when he found that negative reward (punishment) did not necessarily weaken bonds, and that some seemingly pleasurable consequences do not necessarily motivate performance. (Mergel, 1998, p. 3)

So until Skinner, classical conditioning focused exclusively on involuntary and automatic associations in behavior.

Positive Reinforcement and Feedback

Skinner expanded behaviorism into the realm of motivation with his studies of voluntary behaviors in controlled environments, called operant conditioning. According to Mergel (1998), operant conditioning refined classical conditioning with the following concepts:

- Positive reinforcement: "Responses that are rewarded are likely to be repeated"
- Negative reinforcement: "Responses that allow escape from painful or undesirable situation are likely to be repeated."
- Extinction: "Responses that are not reinforced are not likely to be repeated."
- Punishment: "Responses that bring painful or undesirable consequences will be suppressed, but may reappear if reinforcement contingencies change" (p. 5).

The main implications of this with respect to motivational design is the importance of feedback. Foremost is positive feedback, but also opportunities to make correction to answers to escape negative feedback. To a lesser extent, behaviorism suggests we consider the effectiveness of ignoring negative behavior and

punishment. However, as reinforcements change, so do these change easily. Therefore, they may best be used occasionally such as overall scoring in the activity end rather than immediate negative feedback with each incorrect response.

Cognitivism

Cognitivism departed from behaviorism with the contention that "environmental 'cues' and instructional components alone cannot account for all the learning that results from an instructional situation. Cognitivism asserts that people can learn not only through reinforcement, but also through observation and cognition. In particular, key elements include the way that learners attend to, code, transform, rehearse, store, and retrieve information. Learners' thoughts, beliefs, attitudes, and values are considered to be influential in the learning process" (Ertmer & Newby, p. 59).

The key contributions of cognitivism to motivational design include the following concepts, which are relevant to the study of motivation: schema (existing cognitive structures), three-stage information processing model (sensory input to short term memory to long term memory), and meaningful effects (easier to remember information when it is meaningful) (Mergel, 1998, p. 6).

Existentialism: Student-Centered Teaching and Actualization

"What are the proper roles of teacher and student?", the first is both a tenet and a caveat. That is, *the titles "teacher" and "student" merely signify interchangeable roles we play, not exclusive identities*. It is incumbent on a teacher not only to teach, but also to learn. Likewise, learning is sustained by the student teaching what he knows. In simpler terms, the teacher is also a student; and students, when allowed, benefit from teaching each other. Getting caught up in the identity "Teacher" can inhibit growth as such as well as limit the "student" by consigning him to a passive role.

The teacher's role is two-fold: firstly, arousing motivation by making knowledge useful and challenging and secondly, providing the knowledge relevant to the students' newly stimulated interest. Selecting material and topics relevant to our students' lives motivates them not only to take an interest in what may otherwise seem uninteresting. Furthermore, it gives them the sense of fulfillment that comes from learning something that they can currently apply or, at least, are aware of their own potential to apply.

Existentialists view the learning as an experience as something that happens separately in the mind of each student. What the instructor intends to teach is not equivalent with what each student learns; learning is an individual experience. Even when accomplished in cooperatively, each student is the agent of his own learning.

Actualization. Existentialists seek to enable each student to actualize his personal potential in socially desirable ways. In this purpose, the existentialist and pragmatic imperatives are combined; "to thyself be true" acknowledges that "man is not born to himself alone." In this combination, the push to develop knowledge by actually using it is doubly stressed.

Constructivism

Like Existentialists, Constructivists depart from the objective standards of cognitivism and behaviorism with the contention that "learners construct their own reality or at least interpret it based upon their perceptions of experiences, so an individual's knowledge is a function of one's prior experiences, mental structures, and beliefs that are used to interpret objects and events" (Jonasson, 1991). If knowledge is constructed from experience, this implies that motivational design will benefit from real

world connections (i.e., relevance). Likewise, if as Mergel (1998) paraphrases Merill (1991), "learning is an active process in which meaning is developed on the basis of experience" and if this arises gradually through "negotiation of meaning, the sharing of multiple perspectives and changing of our internal representations through collaborative learning" (The Assumptions of Constructivism section, ¶1), then it follows that learners will benefit from control over their own learning pace and processes.

The above statements represent the 'hard' version of constructivism. However, under the title of constructivism falls a continuum of methods and beliefs. A 'soft' version of constructivism does not share the existentialist premise, but only the injunctions to allow students opportunity to engage in constructive rather than rote tasks and passive instruction. This 'soft' view of constructivism is supported by findings as far back as 1956, when Erickson found that students who produced a film on science concepts had more favorable attitudes toward instruction and toward science than students who only watched science films (Thompson et al., 1996, p. 60). Active involvement in the learning situation continues to be validated as a key contributor to intrinsic motivation.

Paris and Byrnes (1989) identify traditions in "cognitive constructivism": gestalt, cognitive psychology, adaptation, and social reconstruction: "The Gestalt principles reveal that cognition imposes organization on the world and people do not interpret bits of data separately" (p. 170). Following upon Gestalt were the forerunners of cognitive psychology including "Bartlett's (1932) research on memory and communication illustrated how adults supply missing information consistent with their background knowledge. Like Gestalt principles of perception, memories and communication become more, and not less, organized with progressive reconstructions. Bartlett (1932) demonstrated that subjects interpret what they hear and remember according to their schemata and expectations" (p. 170). Baldwin, Binet, and later Piaget developed a theory of adaptation to environmental pressures which occurs in progressive stages of knowledge induction. "Adaptation is indicated by the development of more sophisticated ways to represent and organize information" (p. 171). Finally, Vygotsky's "emphasis on interpersonal guidance and social reconstruction that promotes self-regulation is an important complement to psychological theories that emphasize the individual's construction of reality."

There are common themes running through all these theories. One is the importance of activating prior knowledge in constructing new knowledge.

Active Learning

Although cognitivism brought forward the concept of activating prior knowledge, constructivism expanded on this by emphasizing another concept implicit in this -- active learning through various levels. Paris and Byrnes cite a key feature of constructivism as its emphasis on "progressive refinements in levels of understanding" (p. 172).

Individualization

Another theme is individualization. Individualized instruction is critical to the success of constructivist ideas about learner's developing their own personal knowledge-bases. However it should not be assumed that because learning is individualized that it is therefore solitary. On the contrary, Piaget (1932) and Vygotsky (1929) have shown how learners benefit from collaboration and comparison with other's ideas in developing their own. Constructivism is not the only theory to support individualization, however unlike others it does make it necessary.

However, other learning theories can also support individualization. Fenrich (1997) outlines advantages of using multimedia for individualized instruction, from what appears to be primarily an objectivist point of view, favored by behaviorists and cognitivists. Particularly, multimedia can enable learners to:

- "Work at their own pace, proceed when they are ready, control their own learning paths, and review as often as they wish"
- "Learn from an infinitely patient tutor that can adapt instruction to individual abilities and backgrounds and present information in different ways"
- "Actively pursue learning and receive immediate feedback"
- "Undergo objective evaluation through tests based on specified criteria"
- "Enjoy privacy, since they experience no embarrassment when mistakes are made"
- "Learn when a need arises" (“just in time” learning)

- "Study when they want to at any time of the day or night (if the equipment and facilities are available)" (p. 6-7).

Moreover, according to Fenrich (1997), there are measurable success to be attained from these benefits. Individualized lessons are alleged to "promote increased learning and retention rates and overall success" of "up to 50 percent" (p. 7). Likewise, learning time is reduced by "up to 50 percent' because students tend to be more attentive and spend more time on-task. Lacking any supporting studies however, these numbers must be taken as descriptive findings.

In fact, to the contrary, in the aforementioned study by Gardner and Miller (1997), the overall conclusions are not rosy about the time savings and efficiency of individual learning in self-access centers in Hong Kong. In repeated interviews, Gardner and Miller (1997) highlight the frustration felt by all parties (users, tutors, and managers), as well as his own regret about the difficulties of determining whether autonomous learning has been successful.

Tutorial Design

Strategies derived from learning theories are not sufficient for designing an effective tutorial. In addition to strategies such as active learning and individualization, strategies specific to the medium are also needed.

Gagne's approach to instructional design identifies five types of learning: verbal information, intellectual skills, cognitive strategies, motor skills, and attitudes. Gagne (1974,1977) specifies nine instructional events. The tutorial will more comprehensively meet student needs if attention is paid to integrating each of these events into the tutorial design during the design process. With that in mind, these events can also mapped to familiar design issues, as summarized in the following table.

Table 6. Instructional Events and Design Issues

Instructional Event (Gagne)	Attendant Design Issues
1. Gaining attention	Interactivity
2. Informing learners of the objective	Content; Content Structure
3. Stimulating recall of prior learning	Content; Memory
4. Presenting the stimulus	Content; Content Structure; Navigability
5. Providing learning guidance	Content; Affordances and Convention
6. Eliciting performance	Content; Usability; Errors
7. Providing feedback	Visibility and Feedback
8. Assessing performance	Evaluation
9. Enhancing retention and transfer	Memory

Interactivity

Where the tutorial takes on the role of instructor, it also takes on the responsibility of gaining attention. In the tutorial format this is mainly accomplished through interactivity.

> It appears that the interactivity afforded by hypermedia environments may positively influence student learning. The work of the Vanderbilt group also suggests that hypermedia environments may provide opportunities for creating meaningful learning contexts with which students can interact (Thompson et al., 1996, p. 53).

Initial research efforts in the field have suggested that interactivity afforded by hypermedia environments may positively influence student learning (Thompson et al., 1996, p. 55).

> Abrams and Streit (1986) conducted an experiment to compare the effectiveness of interactive video to linear video for teaching a basic photography course to education majors. The results indicated that the interactive video group made significantly larger gains in achievement than the linear video group. The study also found that the use of interactive video had a greater impact on attitude than on achievement. Researchers speculated that one of the reasons users of interactive video presentations had higher achievement scores was because of the level of attentiveness required of the learner. (Thompson et al., 1996, p. 52)

Anandam and Kelly (1981, as cited in Thompson et al., 1996) stated that interactive video "changes the student from passive observer to active participant" (p. 52). The linear video group cited the lack of opportunities for

review and practice as a major shortcoming of the linear video.

Third, interactive video technology has random access capabilities allowing teachers and students to instantly access information for discussion, and interactive video facilitates the exploration of the same context from multiple perspectives (Thompson et al., 1996, p. 53).

Moreover, interactivity need not only be an affordance of the tutorial, but can also be an outcome among students when they work together in small groups. When the tutorial is laden with questions directed at learners, it "leads to excellent discussions, especially when the computer asks students to summarize and explain concepts to each other" (Fenrich, 1997, p. 118).

Content

"Usability studies indicate a fierce content focus on the part of the users, hence content is number one" (Nielsen, 2000a, p. 100). Fenrich (1997) offers these suggestions for making text-based content understandable:

- "Make text understandable by ensuring message clarity, using simple words, avoiding unnecessary wording, and keeping sentences and paragraphs short"
- "clear and concise language"

- "use simple words"
- "try to eliminate words without changing the meaning"
- "state facts in short sentences. … Remember to vary sentence length" (p. 118)

Nielsen likewise affirms that "skimming instead of reading is a fact of the web, and has been confirmed by countless studies" (Nielsen, 2000a, p. 104).

Navigability

One specific learner concern is the tendency for students to become disoriented as they attempt to access the information (Thompson et al., 1996, p. 42). In addition to large quantities and types of information, hypermedia environments offer learners an opportunity to explore in their own way and learn with their own style; these environments offer learners a type of intellectual freedom never before possible (Thompson et al., 1996, p. 53).

One specific learner concern is the tendency for students to become disoriented as they attempt to access the information (Thompson et al., 1996, p. 42). Nielsen provides these tried-and-true and easy-to-follow tips for reducing disorientation:

- "People get lost and move in circles when websites use the same link color for visited and new destinations. To reduce navigational confusion, select different colors for the two types of links" (2004b, Summary section)
- Use link titles, supported by nearly 100% of browsers, to tell users about where they can go. The HTML code looks like this: <a HREF="/url/" TITLE="additional description here"> (1998/2004, ¶2).
- "To maximize the perceived affordance of clickability, color and underline the link text" and "Don't underline any text that's not a link" (2004a, ¶1-2).

"In several studies of pre-Web hypertexts, having an overview map of the information space improved users' performance between 12% and 41%" (Nielsen, 2005b, ¶1).

According to Williams and Tollett (2000), "if your site is large and/or complex, you may want to add a feature that will help readers find the specific information on that page they stumbled across last week and now can't remember under which section it appears" (p. 140). Options they suggest include: an alphabetical index, an outline such as a table of contents, or a site map

(e.g., diagram of the site organization and structure with page links). Image maps (an image with links to other areas of the site) are an attractive choice, but prohibitive for the accessibility of those who are on slow connections, have turned off images, or are using old browsers which can't read client-side image maps.

Content Structure

New layers of organizational structures such as a site map are recommended to help the learner explore a website. Providing a site map at the home page will provide the learner with an overview of the size and depth of the topic to be explored (Marchionini, 1988; Heller, 1990, as cited in Thompson et al., 1996, p. 54). Menu options should not exceed 10. In the event that there are more than 10 menu options, then the designer should construct a menu hierarchy that splits them across two screens (Thompson et al., 1996, p. 50). One method of structuring content in this way is the 'inverted pyramid' which starts with putting the conclusion on top and then branch out into things lead to it (Nielsen, 2000a). Users report they like this method because if they are interested then they can continue to explore the topic in depth.

Affordances and Conventions

Perceptual psychologist J. J. Gibson (1977, 1979) invented the word affordance to refer to a property in the environment that indicates how it can be acted upon by someone. Although it is a truism of web-design to make the most of perceived affordances and conventions, it is all the more imperative with second language learners and teenagers who more readily tune out excessive text, particularly instructions and feedback.

Norman (2002b) explains the significance of affordances to users: "In everyday situations, behavior is determined by the combination of internal knowledge and external information and constraints. People routinely capitalize on this fact. They can minimize the amount of material they must learn or the completeness, precision, accuracy, or depth of the learning" (p. 55). What this means for language learners is that they can reduce time spent learning the interface in order to maximize the available processing power available for language tasks.

Consider the various affordances that can be seen in a tutorial. Norman identifies four classes of constraints: physical constraints, semantic constraints, cultural constraints, and logical constraints. In the case of an online tutorial, a physical constraint would be the size

of the screen. On the other hand, the method of deleting files by putting them in the trash can is not physically constrained; it could instead function by scooping the files up with the trash, yet everyone expects to put the files into the can because of the semantic constraint that the file is easier to move than the can. Most web design constraints derive from cultural conventions. For example, take the expectation that underlined text indicates a link to another page; there is no reason this has to be so except that underlining is the cultural convention for a hyperlink. The final type of constraint is a logical constraint. For example, the placement of a help button is frequently in the upper right corner, not because it has to be, nor because it makes sense there, nor because it is an accepted convention (yet). Rather, it is in the upper right simply because it is the only logically remaining place, given that the left side and upper left of the screen is usually reserved for the navigation menus and the bottom may not be visible on small screens.

In order to maximize the use of affordances, Nielsen (1993) and Norman (2002a) both stress the need to follow conventions. However imperfect a convention may be, it is usually preferable to confusing the user. Users spend more time on other sites than any given site. If the given site

does not function like others, users will miss features, waste time on how to use the site instead of its content, and even give up sooner.

Visibility and Feedback

According to Norman (2002b), the principles of visibility and feedback also guide the user in knowing what to do. If each action has "an immediate and obvious effect (p. 99)", then the user will intuitively learn how to interact with the tutorial. If relevant parts are most visible, then the user can see what to do. For things which cannot be made visible, sound can provide feedback:

> … natural sound is as essential as visual information because sound tells us abut things we can't see, and it does so while our eyes are occupied elsewhere. … One of virtues of sounds is that they can be detected even when attention is applied elsewhere. But this virtue is also a deficit, for sounds are often intrusive. Sounds are difficult to keep private unless the intensity is low or earphones are used. This means both that neighbors can be annoyed and that others can monitor your activities. (Norman, 2002b, p. 103-104)

Aside from providing usability feedback to the user, an effective tutorial must also provide assessment feedback about how well learners are meeting goals. "Opportunities for feedback should occur continuously, but not intrusively, as a part of instruction" (Bransford, Brown, & Cocking, 1999, Formative Assessment and Feedback section, ¶2). The ideal of continuous formative

assessments has been much easier to achieve with interactive technologies which allow for immediate feedback, suggestions, and the option to try again.

Norman also recommends the converse of visibility – hiding some controls – when the controls are not being used. To "minimize the appearance of complexity", he suggests using "a panel on which only the relevant controls are visible" (Norman, 2002b, p. 209). However, this should not be confused with actually reducing the number of controls, by combining multiple functions into a single control. For all the simplicity gained in appearance, complexity is added to learning how to use the interface. "By having a separate control for each function, you minimize complexity of use" (Norman, 2002b, p. 209).

Errors

Like communicative theory in second language acquisition (SLA), instructional design theory emphasizes the need to be tolerant of errors. Donald Norman (2002b) advises, "Try to design the system to allow for errors. Realize that normal behavior isn't always accurate. Design so that errors are easy to discover and corrections are possible" (p. 131).

Norman (2002b) suggests the following strategies for being more error tolerant:

1. Understand what causes errors and minimize them
2. Make it possible to 'undo' actions – or make it harder to do what cannot be reversed.
3. Make it easier to discover and correct errors
4. The user is not making errors; the user is doing a task through imperfect approximations of what is desired. (p. 131)

Memory

Memorable design is a critical consideration in this tutorial, both with respect to its design and its content. There are two systems of memory which work together to enable learning. The first is short term memory (STM), a type of memory which stores temporary events for just a few seconds. The other is long term memory (LTM), type of memory which stores past events.

> Short-term memory is the memory of the just present. Information is retained in it automatically and retrieved without effort; but the amount of information that can be retained this way is severely limited. Something like five to seven items is the limit of STM, with the number going to ten or twelve if the person also rehearses. (Norman, 2002b, p. 66)

For instructional design, this means that the number of new vocabulary items introduced at one time should not exceed five to seven. For test design, this may mean it is

desirable for the number to exceed twelve, in order that it is not possible for learners to "rehearse" knowledge instead of acquiring it, in situations where students may expect to be tested.

Norman (2002b) says that while short-term memory is needed for everyday tasks, it is extremely temporary and fragile – disappearing upon the slightest distraction.

> As a rule it takes time to put stuff away in LTM and time and effort to get it out again. This is how we maintain our experiences, not as an exact recording of the events, but as interpreted through our understanding of them, subject to all the distortion and changes that human explanatory mechanism imposes upon life. How well we can ever recover experiences and knowledge from LTM is highly dependent upon how the material was interpreted in the first place. (p. 67)

This goes to reinforce constructivist concepts about the importance of constructing knowledge personally through relevant application and collaboration. It also goes to show the insufficiency of a behaviorist and cognitivist style tutorial providing merely input, but not stressing the need for application and output – processes which are necessary for the retrieval of studied vocabulary in appropriate contexts.

Norman (2002b, p. 67-72) argues that there are many ways people store and retrieve information. Chief among these are:

Memory for arbitrary things -- e.g., items with no relationship to one another or to prior knowledge, such as learning the alphabet or how to tie a shoelace. In these cases, we resort to techniques for decreasing the "memory load", such as using rhyme and rhythm. This kind of rote learning is usually of poor quality and results in difficulty when applying the knowledge to new situations since there is little comprehension of the items.

Memory for meaningful relationships -- e.g., items which are related to one another or to prior knowledge. In these cases, things make sense because they are related to other things we already understand. Norman discusses the example of a colleague learning to operate the turn-signal on a motorcycle. Because the switch was on the left handlebar, the man incorrectly thought that "pushing it forward should signal a left turn." By "reinterpreting the action" in relation to handlebar *movement* (i.e., "for a left turn, the left handlebar moves backward), he was able to remember to pull the switch backward to signal a left turn. In terms of idioms acquisition, this could mean that relating to an idiom as a metaphor, could help in remembering it. Metaphor should not be confused with explanation; the metaphor is not an explanation for the item to be remembered, but merely an interpretation.

Although some idioms were previously metaphors, their meaning is constrained by their status as fixed expressions.

Memory through explanation -- e.g, items which are 'remembered' by deriving them through an "explanatory mechanism". Explanation is a more powerful method of memory, because details need not be learned but can be derived from the explanation. This method however takes more time and is better suited to idioms which are not routinely used in conversation, but may be wanted for less time sensitive tasks such as reading or writing.

> If necessary, the system should provide technological assistance for any temporary memory requirements. The limitations of long-term memory (LTM) mean that information is better and more easily acquired if it makes sense, if it can be integrated into some conceptual framework. Moreover, retrieval from LTM is apt to be slow and to contain errors. Here is where information in the world is important, to remind us of what can be done and how to do it. (Norman, 2002, p. 191)

On this point, Norman and Krashen are strikingly similar in stressing the importance of contextual clues to help us understand and remember information. The conclusion is also similar – simplify tasks. Norman (2002b, p. 188-189) suggests seven ways that this can be done:

- Use both knowledge in the world and knowledge in the head.
- Simplify the structure of tasks
- Make things visible
- Get the mappings right.
- Exploit the power of constraints, both natural and artificial.
- Design for error.
- When all else fails, standardize.

Task structure can be simplified in a few ways: through the use of "mental aids" (such as a list of new vocabulary words), by improving feedback and visibility by using technology (such as a scorekeeping function), and by changing the nature of some tasks (such as matching parts of an idiom rather than typing the missing part, avoiding spelling and typing errors).

Usability

In a tutorial, the teacher's role is to serve as a guide. The tutorial itself should require no teaching. Therefore, usability is critical to a successful tutorial. Usability is essentially about making tasks online as simple as possible for users.

Nielsen (2004/1996; 2003; 2002; 1999) reports on the best practices in web design. Select recommendations pertaining to tutorial design are:

1. Put your name on every page with a logo linking to the home page
2. Have a search for sites over 100 pages
3. Write clear and simple headlines and titles
4. Use groupings to facilitate scanning
5. Explain the site's purpose with a tagline on the homepage
6. Use graphics of real people and content (not decorations and models)
7. The layout should adjust to users' screen sizes

Among the worst mistakes to avoid are:

1. Using PDF files for online reading
2. Make visited and unvisited links same color
3. Writing in large blocks of text
4. Using a fixed size font
5. Opening new browser windows thereby preventing use of the back button

Finally, no design however well thought out is usable if it is too large to load quickly for the user. "To keep page sizes small, graphics should be kept to a minimum and multimedia effects should only be used when they truly add

to the user's understanding of the information" (Nielsen, 1997, ¶7). Nielsen cites the power-of-10 law, "The basic advice regarding response times has been about the same for almost thirty years [Miller, 1968; Card et al., 1991]" (p. 135):

- Before 0.1 second, the user will perceive the response as instantaneous.
- After 0.1 second, users do perceive a delay.
- After 1.0 second, the user's flow of thought is broken and users may feel they need to provide feedback.
- After 10 seconds, user's attention will stray. Nielsen recommends a progress meter be displayed: "users will want to perform other tasks while waiting for the computer to finish, so they should be given feedback indicating when the computer expects to be done" (p. 135).

Response times under .1 second are only conceivable using a super high-speed Internet connection. Hence, Nielsen (1997) reports that in every usability study conducted since 1994, "users beg us to speed up page downloads" (¶2).

Accessibility

The primary target audience is university aged students, therefore the limitations and preferences of young adults is a chief concern. In a series of studies, in which American teenagers tested 23 websites, Nielsen (2005a) refuted popular misconceptions about teenagers as tech-savvy lovers of glitzy websites, and affirmed others about teens' lack of patience, short attention spans, and poor reading skills. Nielsen found "websites must be simple - but not childish - and supply plenty of interactive features" (Summary section, ¶1) such as:

> …online quizzes, forms for providing feedback or asking questions, online voting, games, features for sharing pictures or stories, message boards, forums for offering and receiving advice, and features for creating a website or otherwise adding content. (No Boring Sites section, ¶4)

Although the tutorial is not intended for people with disabilities, neither it should unnecessarily exclude anyone simply out of ignorance of easily adjusted details. Based upon observation of 84 disabled users and 20 controls using 19 websites, Nielsen (1996) defines the following groups of disabilities and general considerations for each:

- Visual: Use contrasting colors, relative (resizable) fonts, and alt-tags

- Auditory: Provide transcripts of media clips
- Motor: Avoid maps and images that require extremely precise mouse control
- Cognitive: Provide a site map for those with difficulty remembering the lay out of a site

Likewise, W3C (www.w3.org) provides three priority levels of guidelines, requiring more adjustments than the target-audience needs. The following table shows W3C minimum general guidelines for web accessibility.

Table 7. Web Content Accessibility Guidelines

Web Content Accessibility Guidelines: Priority 1, General Checkpoints
1.1 Provide a text equivalent for every non-text element (e.g., via "alt", "longdesc", or in element content). This includes: images, graphical representations of text (including symbols), image map regions, animations (e.g., animated GIFs), applets and programmatic objects, ascii art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds (played with or without user interaction), stand-alone audio files, audio tracks of video, and video.
2.1 Ensure that all information conveyed with color is also available without color, for example from context or markup.
4.1 Clearly identify changes in the natural language of a document's text and any text equivalents (e.g., captions).
6.1 Organize documents so they may be read without style sheets. For example, when an HTML document is rendered without associated style sheets, it must still be possible to read it.
6.2 Ensure that equivalents for dynamic content are updated when dynamic content changes.
7.1 Until user agents allow users to control flickering, avoid causing the screen to flicker.
14.1 Use the clearest and simplest language appropriate for a site's content.

World Wide Web Consortium. (1999, May 5). *Web Content Accessibility Guidelines 1.0*. Retrieved November 2, 2005 from http://www.w3.org/TR/WCAG10/

Evaluation

Irrespective of the media or the methods used, research has shown that an important factor in learning is the student's enjoyment of learning and perception of competence at the task (Krashen, 1994; Coles, 1998). One thought about boosting student motivation and feelings of competence is to provide for continual formative assessment. This serves both the students' need to see progress and the instructor's need to evaluate the effectiveness of instruction.

Formative Evaluation. For formative evaluation of the tutorial usability, the following methods are recommended by Boyle (1997) for their ease of administration and analysis:

- *Observation* of the user "working with prototypes or mock-ups of the system"
  - *Structured observation* can be done with "sophisticated recording of behavior" but this "leads to high transcription and analysis overheads" (p. 201).
- *Interviews* with users
  - "A *structured interview* consists of a set of preplanned questions."
  - "An *informal, unstructured interview*, by

contrast allows the conversation to follow its own course".

Each method has its advantage. Whereas observation is "the most direct way to gather data … of system effectiveness and usability", interviews provide a "rich understanding of users' reactions to a system" (p. 203). Nielsen & Norman (2000) suggest the following protocol for observational interviews: "Watch. Don't interrupt. Don't offer to help no matter how great the temptation. Don't ask why they have done something until after the session is all over. (Sit behind them so you aren't in the way.)" (¶3). Alternate methods of formative evaluation include using:

- Focus group protocol - a list of questions for discussion by a panel of experts
- Anecdotal record form - to record factual descriptions of noteworthy incidents
- Formative review log - a comment book with a separate page for each page of the site

Reeves (1997) provides forms and procedures for each of these methods.

Summative Evaluation. For summative evaluation of pedagogical effectiveness, Boyle suggests:

- Questionnaires can provide overview information in the form of "quantitative summary data" (p.204).

Although questionnaires are easy to administer and analyze, this is because they provide superficial data, hiding reasons and variations within responses. Alternate methods for summative evaluation include usability labs, user interface rating, and expert review (Botha, n.d.; Reeves, 1997).

Nielsen (2000b) advises that a usability study need include no more than five users because over 75% of a site's usability problems are discovered with the first five users. After the problems identified by the first test group are fixed, the additional 25% of problems can be identified in further rounds of study.

Scientific Expert Evaluation. Expert review is particularly useful for scientifically evaluating the pedagogical effectiveness of a site. Larsen-Freeman & Long (1991) advise language acquisition researchers to evaluate instructional design vis-à-vis:

1. The way linguistic input is manipulated
    - "The *sequence* of linguistic units"
    - "The *frequency/intensity*"

- "The *saliency* of those encounters brought about by the linguistic/interactional modifications"

2. Types of production tasks
   - "Are students allowed or encouraged to avoid error, or are they set tasks which lead them to take linguistic risks"?
   - "Do the pedagogic tasks teachers set allow planning and/or more or less attention to speech with resulting differences in the quantity and linguistic complexity"? (p. 325)

The above concerns can be specified on a checklist, which is then used as an instrument for evaluation. Ideally, the checklist is jointly designed by an instructional design expert and subject matter expert (Reeves, 1997, Expert Review Checklist section, ¶1).

Instructional Design Process

The ADDIE framework specifies a process of Analysis, Design, Development, Implementation, and Evaluation. The Dick-Carey design model specifies a more complex process with more steps, choices, and iteration. Although the two are not completely similar, they complement each other's weaknesses.

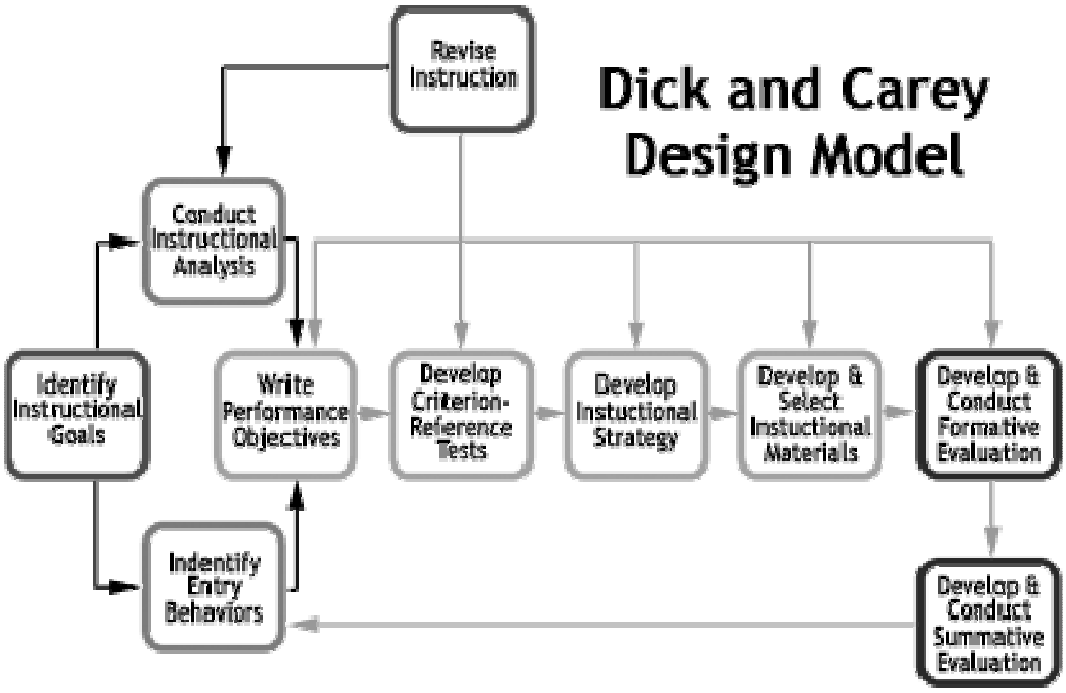


Figure 3. Dick and Carey Design Model

Dick, W. & Carey, L. (1996). *The systematic design of instruction* (4th ed.). New York: Harper Collins College Publishers.

The Dick-Carey model can be understood within the main ADDIE structure as follows. Under the Analysis section are the following stages from the Dick-Carey model: "Identify Instructional Goals", "Conduct Instructional Analysis", "Identify Entry Behaviors of Target Audience", and "Write Performance Objectives."

These subsequent Dick-Carey stages are grouped under the Design section: "Develop Criterion Reference Tests" and "Develop Instructional Strategy." Under the Development section is the "Development and Selection of Instructional Materials." The Implementation section matches the least well and is one area where the ADDIE model provides a consideration overlooked in the Dick-Carey model. In this section, it is important to reconsider the Instructional Strategy and Materials stage, with special attention to anticipating and resolving issues which occur in actual implementation. Finally, the ADDIE process concludes with the Evaluation phase, which Dick-Carey breaks down into two stages – formative and summative.

Summary

This chapter looked at the problems facing idioms learners, their teachers, and instructional designers. The online environment offers unique opportunities to learn idioms in a setting which is both naturalistic and convenient.

Unfortunately, the circumstance of autonomous learning puts learners in the difficult position of making decisions traditionally faced by teachers. How many idioms is an optimal number to study? Is linguistic competence

sufficient? What is the best way to practice? The tutorial format and authoring tools provide a model for students of one method of learning idioms autonomously.

Several learning theories were found to have beneficial methods for learning idioms, however constructivist approaches were found to be the most practical for autonomous learning. Moreover, if learners take an interest in the constructivist approach of authoring their own materials, then their tutorials can provide a renewable source of comprehensible input among learners at similar levels.

Several perspectives, both scientific and practical were considered regarding the questions posed about how learners encode and decode idioms:

- How do learners figure out the meanings of idioms on their own?
- How do learners remember an idiom along with its meaning?
- How do learners remember how and when to use the idiom?
- How do learners gain communicative competence with speeded tasks?

Numerous vocabulary and idioms learning techniques were identified in reviewing the literature. However, these will be a challenge for students to learn on their own, and additional class time or tutoring was found to be needed in order to support learners. The area of neurology and brain based learning were found to have much potential for revealing how language in general and vocabulary in particular is encoded and decoded. It will be important for vocabulary teachers to follow this field in order to better help their students in remembering low-frequency and highly abstract idioms.

Online learning was shown to have many benefits in supporting autonomous learners, not only through its convenience and high-quality content for mass consumption, but also through the individualization of online communities and the use of project based learning with the aid of tool software. Various techniques were found for maintaining learner motivation throughout this process. Of particular interest to idioms learners is the process of goal setting, which not only serves to focus attention and relevance, but eventually builds confidence in one's learning abilities via meeting and refining those goals.

Finally, the best practices and processes within the field of instructional design were evaluated vis-à-vis the

goal of creating an interactive tutorial for learners of idioms. The Dick-Carey design model was selected to guide the instructional designer through the process of implementing the best practices identified in the literature review into a final product to serve idioms learners and their teachers.

CHAPTER THREE

PROJECT DESIGN PROCESSES

Introduction

Chapter Three documents the steps used in developing the project according to the ADDIE framework and Dick-Carey design model. The current design goal is to hone the tutorial structure, which eventually can be used as a model for student created materials on other themes.

The ADDIE framework provides a clear overview of the process, however the Dick-Carey model better accounts for the role of instruction in design, delivery, and revision. The Dick-Carey model allows for iterative design, typical of classroom created materials. The site will not only be accessed by students learning independently, but also integrated into the American Idioms course as a model of some strategies for learning idioms taught in the course. This model was also suitable for the timeframe of external (coursework) requirements, because it begins each cycle with identifying instructional goals and ends with evaluation.

Analysis

Identify Instructional Goals

Learning idioms is a time consuming process. As explained in the Introduction, there is not enough class time to teach students even a fraction of the idioms they need to learn. It is evident each time the syllabus is reevaluated that more class time is needed to practice idioms and to hone strategies for learning and memorizing idioms. Therefore, the instructional objectives are to:

- spend less class time on teaching specific idioms and more on communicative competence,
- equip students with strategies and techniques for learning autonomously,
- promote memory skills and strategies,
- learn idioms more efficiently, and
- engage active learning by appealing to personal interests, experiences, and intelligences.

Instructional Analysis

Students do not typically report learning many idioms outside of class because they are generally unable to decode the meanings of idioms on their own. In reviewing strategies to help them, the literature shows nearly as many vocabulary acquisition methods as there are

practicing teachers. Rather than take one position, the tutorial attempts to include strategies from various approaches with an emphasis on strategies students can use autonomously.

The gap between receptive knowledge and productive competence with idioms is huge; there are many idioms which students learn well enough to understand but not use. Learners need meaningful and authentic tasks in order to build communicative competence. In line with this, the tutorial needs activities focused on output, including discussion and chat exercises.

Pacing and timing of classroom instruction involves compromises which do not suit all learners. Idioms are more difficult for some learners to remember and feel confident using than others. In class, this has posed problems when a few students are still forgetting the meaning of an idiom, while others are ready to use the idiom in discussion. Some students need more elaboration (examples and sample sentences) while others would rather move on to the next idiom. Allowing each student to work at his or her own pace and practice outside of class would greatly reduce frustration, thereby potentially hastening progress in idioms and rewarding independent learning.

Identify Entry Behaviors of Target Audience

This tutorial is aimed at teen and adult English language learners of intermediate and advanced levels of proficiency. The majority of the students are foreign visitors and university bound international students focused exclusively on English studies.

Many are seeking a high score on the TOEFL (Test of English as a Foreign Language) to achieve admission to an American university or get good jobs in their own countries. The reason that they come here to learn is so they can not only pass the test, but succeed in American culture and actually use English now, as they plan to in their careers. Many students, particularly those from Asian countries, are proficient at English within formal learning contexts, i.e., jumping through hoops and studying to the test. Most students also realize the limits of such English, and soon experience frustration with its limited application to their academic and career interactions in the United States.

Individual learning preferences are another issue. Many students come from educational backgrounds in which they rely on rote memorization. This is not usually effective in the face of so many idioms, especially since the meanings of idioms have nothing to do with the

component words. Students need to be equipped with a larger range of strategies.

Aside from their academic and career goals, students also have extracurricular needs. Their need for idioms can be put in one of two categories: activities requiring receptive knowledge and activities requiring communicative competence. Common activities requiring receptive knowledge of idioms include watching popular culture media, such as sitcoms and news, listening to music, reading news and magazines, and of course, having conversations. Most students are highly motivated to be able to interact with Americans, due to both instrumental and integrative motivations.

On the one hand, interaction is a means of practicing English. To this end, receptive knowledge of idioms is sufficient. On the other hand, many learners desire to fit in. For integrative purposes, competence using idioms is a priority. Idioms are used in all aspects of life, but communicative competence in idioms is especially needed for discussing personal matters and sensitive subjects, such as religion, death, and personal relationships. While it is possible to discuss sensitive subjects without using idioms, learners appreciate the usefulness of idioms in being more subtle – saying the

senator “had an affair" for example rather than being more explicit.

Culturally, many students are unprepared for the differences between their culture and ours with respect to personal relationships. To that end, the tutorial also prepares students for discussions in their American Culture class. The lesson is designed to get students to discuss the differences among their cultures and with American culture.

However, students frequently report frustration expressing themselves on personal matters. In this respect, the face-to-face classroom environment has its own limitations. Culturally, students may be shy asking about unfamiliar idioms, particularly on subjects such as romance. Nonetheless, they are eager to know these idioms, given the opportunity to practice them in a non-threatening environment.

Most learners, particularly those from Asian educational systems, report feeling freer to express themselves in an online environment. Even learners who know many idioms are not comfortable using these idioms because they do not remember them easily and have not had the opportunity to practice them. On the other hand, the online environment extends the opportunities afforded by

the classroom environment. The website will provide an opportunity to build confidence and familiarity with idioms before they are used in class discussions.

Performance Objectives

It is expected that the students will demonstrate an understanding of idiomatic expressions by meeting the performance objectives in the following table.

Table 8. Performance Objectives

1. Recognize idioms in listening and reading exercises
2. Identify attitude of idioms: positive, negative, or neutral
3. Use various comprehension strategies to respond to comprehension questions about dialogues containing idioms
4. Recall the form of idioms and input correctly into a cloze dialogue.
5. Match idioms and their definitions
6. Write and perform a dialogue incorporating idioms.
7. Use idioms and responding to them appropriately in discussions

Moreover, students who apply themselves will gain confidence using idioms without the pressures of immediate response characteristic of face to face interaction. It is hoped that students will assess and take more responsibility for their own progress and learning goals; however, it is too much to expect sudden or measurable changes in meta-cognitive awareness.

Design

For the purpose of this project, the Criterion Reference Test and Instructional Strategy stages of the Dick-Carey model fit best under the ADDIE model's Design phase because instructional strategy must be decided before materials development begins or in the early stages of development.

Develop Criterion Reference Tests

Criterion reference tests were developed for Level 1 idioms in order to gauge the learners' entry level and progress with respect to the following objectives: recognizing idioms, recalling the form of idioms, and matching idioms with their definitions. The other objectives – writing, performing, using, and responding to idioms – would need to be demonstrated through activities described in the implementation section.

Instructional Strategy

It was decided to take a thematic approach to idiom selection, because themes can accommodate several findings in the literature review:

- Words are remembered through *associations*.
- Learners pay more attention to input they perceive as *relevant*.

- Fluency is gained through *meaningful* practice discussions
- Time consumption and memory load are reduced when vocabulary is *grouped*.
- Vocabulary is understood from its context

The topic of love was selected as the theme for the model tutorial for its universal appeal and its potential for exploring the cultural specificity of idioms. Moreover, there are a number of high frequency idioms about love at varying degrees of difficulty and which exhibit various features and categories of idioms: phrasal verbs, noun phrases, transparent idioms (i.e., easy to understand), opaque idioms (i.e., difficult to understand), and euphemisms (i.e., an inoffensive expression that substitutes for one that may be offensive).

Among the many considerations in designing the tutorial were: the design scheme, content structure, and navigational structure. Color, typography, and other detailed features will be discussed in the development section however, as they were decided through experimentation.

Design Scheme

In order to meet the instructional objectives for efficient and interesting learning, the design scheme should satisfy the following criteria: Is it engaging? Is it efficient to navigate?

The first design choice was in selecting how to group the idioms to teach. A thematic approach was selected in order to build familiarity with the idioms and confidence using them. This is also supported by memory research and allows for more meaningful practice discussions. The topic of the first module is love and relationships, a popular theme with the target audience. This module will serve as the basis for future modules on other themes.

For each individual module, the design scheme chosen is a hybrid of two ambiguous organizational schemes – it is both audience specific (or rather specific to audience level) and task oriented (McCracken & Wolfe, 2004). The main task areas corresponding to menu pages are: Introduction, Vocabulary, Listening, Practice games and exercises, Discussion, and Quiz.

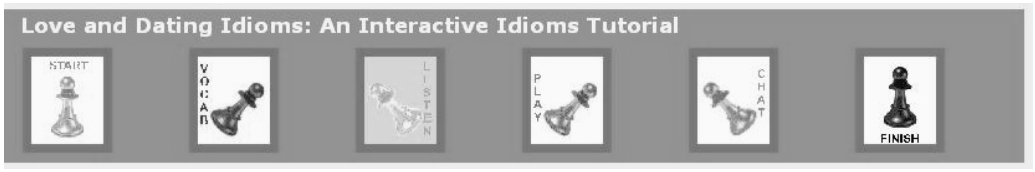


Figure 4. Screenshot of Navigation Bar

These can be selected from a top navigation bar on each screen. Because the buttons could only fit short names, some of them had longer descriptions in the link descriptions and headings of the page. In order to make these headings and buttons more consistent, the same words are used for the headings as for the buttons, with smaller text for clarification.

Content Structure

The foremost design consideration in the content structure is the ability to easily duplicate and alter it for future idioms tutorials on other themes. The other main concern is ease of navigation. The current content structure is hierarchical; however navigation and duplication would be improved by a database structure, which is being considered for a future revision.

Table 9. Content Structure for Each Level

Navigation Menu Item	Sub pages
Introduction page	Links to each level
Glossary	List of idioms
	Definitions
	Pronunciation (Audio recordings)
Listening	Dictations
	Pre-listening warm-up
	Comprehension exercises (with audio recording)
	Post-listening discussion
Memory Games	Flashcards
	Puzzles
Exercises	Grammar exercises
	Written dialogue exercises
Discussion	Discussion links
	Discussion questions
Quizzes	Objective
	Constructive

The previous content structure was a single level consisting of 15 idioms and practice exercises for those idioms, as shown in the following flowchart. The revised content structure has the same layout, however the idioms are divided into three levels of difficulty, and the content structure is replicated with each of these levels. In addition, there is a welcome page linking all three levels.

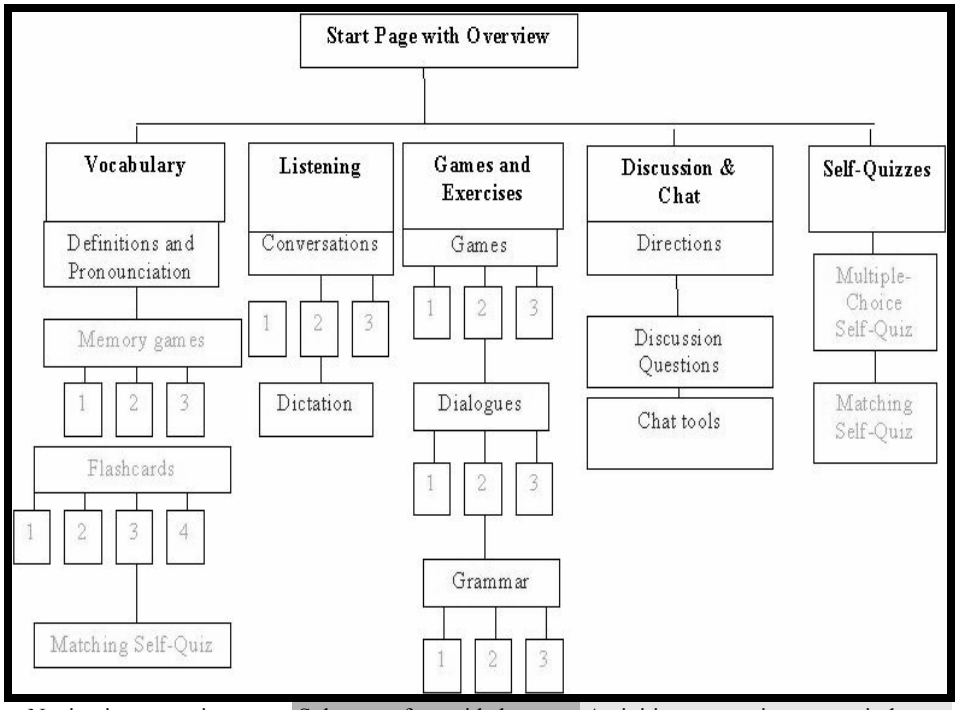


Figure 5. Original Content Structure

Navigation

The hierarchies in navigation were designed so that the beginning of every exercise or activity is no more than three clicks away. Students can progress through the navigation in any order, based on their needs and interest, however the game pawn theme was chosen to suggest a linear progression of tasks. Also, the students will be playing a discussion based board game with similar

content at the end of the thematic unit, so it reminds them of their ultimate objective for using the idioms.

The linear order of tasks was also chosen for students who might not know which activity to do first. Many students feel the teacher knows the best way for them to learn. For the sake of these students, a linear presentation is used to present one way of proceeding through the tutorial. In actuality, the progression is flexible and after a few activities, most students begin moving randomly between the activities they find the most interesting or helpful. If students follow the tasks in the order of navigation buttons at the top, then at the end they will take a quiz showing their progress. This is designed to be open and iterative. If their scores are less than satisfactory, they can go back to review and complete more activities.

It is not expected that each student does every activity thoroughly, but rather that students will choose the exercises that are most productive and interesting to them. Some students prefer more examples and practice exercises while others would rather move on to the next idiom or a different activity. The ability for each student to work at his or her own pace and practice outside of class would greatly hasten progress in idioms

and reward independent learning. Therefore, navigation is meant to be open, allowing students to easily change tasks.

In line with the literature findings about vocabulary learning strategies, navigating to the glossary page has been made easier. Likewise, in order to avoid the navigating a list of idioms is provided for reference on appropriate pages throughout the site. However, the list is not so conspicuous that it is easier to use the reference than to engage one's own memory.

Development

In the Dick and Carey model, this stage is referred to as "Development and Selection of Instructional Materials."

Instructional Media

The first choice was which media to use to deliver instruction. The initial design was done in CSS/XHTML using an HTML editor, 1st Page 2000 (www.evrsoft.com). Interactive exercises were created using Hot Potatoes, a multimedia authoring tool with a graphical interface (www.halfbakedsoftware.com).

Figure 6. Hot Potatoes Menu of Applications

The Hot Potatoes suite includes six applications: multiple-choice, short-answer, jumbled-sentence, crossword, matching/ordering, and gap-fill.

Subsequent development and practice exercises were done in Macromedia Dreamweaver. Future plans include the possibility of using the tutorial as a prototype for a website where students can easily create tutorials on various themes without additional software. In that case, the site would need to shift to a database structure using PHP in addition to HTML.

The product is geared toward delivery on the Internet, so that students can practice from anywhere - any of the computer labs, home, or off campus without

having to carry a CD. Using this method, it is not necessary to give a CD to every student. It is also possible to add more multimedia content than would fit on a CD. It is also easier to control what is accessible and to easily make revisions and improvements based upon feedback during a course. However, occasionally it has been necessary to make a CD for an off-campus student who has a computer without Internet access.

Limitations

Aside from limited technical skills and resources, the strongest design limitation was avoiding long response times and page load times for users, in accordance with the aforementioned "power-of-10 law". Although the target audience had access to the university computer lab with a super high-speed line, the benefit of just-in-time learning would not have been realized if they could not also access the tutorial from home. Nielsen (1997/2004) cites a Nielsen/NetRatings survey showing that 62% of home users in the United States were on dial-up (Update January 2004 section, ¶1). Therefore, the loading times were optimized for a dial-up Internet connection.

Prototype

The development of the revised tutorial began with a prototype. The prototype reflects the aforementioned

design scheme, content structure, and navigation considerations. It also reflects decisions about text, typography, and color. In selecting colors and formatting text, special attention was given to the effects of these factors: proximity, alignment, contrast, consistency, and accessibility.

Text

Text is designed to be minimal on each page. A key reason for this is to save the learner the trouble of scrolling down to see the whole page. Because users are allowed to access from their choice of computers, the design must allow for a variety of displays. Text is designed to fit on a display set at a minimum of 800x600 screen resolution. Because very few Internet users are still using monitors with 640x480 screen resolution, it was decided that the benefit of a larger display was worth the inconvenience to these unlikely users. Another reason for limiting information on each screen is to avoid learners' confusion by too much text. In order to prevent distraction and eye-strain, left alignment is used consistently.

Consistency allows users to unconsciously anticipate the usage of each element after a few pages. For example, a consistent alignment allows users to know where to look

for information without any conscious effort. It is important to make use of unconscious knowledge, since this is how the brain takes in most information.

Another benefit of consistent alignment is that information is equally accessible to those using more limited browsers. Conceivably, it would even be possible to navigate the site on a PDA, a plain text browser such as Lynx. Interpretation should also be easier for browser modified for disabilities.

Typography

The fonts selected are clear, crisp, and not distracting. The font-families Helvetica and Arial were chosen instead of single fonts in order to increase the likelihood of correct display on the users' systems. A sans serif font, such as Arial, is preferable for legibility. "Legibility refers to how easy it is to recognize short bursts of texts, such as headlines, buttons, signs, etc. In print and on the screen, sans serif faces are more legible" (Williams & Tollett, 2000, p. 220). For readability, i.e., easily reading long segments of text, serif fonts are usually preferable. However, legibility is a greater concern than readability since pages are designed to avoid long segments of text.

Font sizes are just large enough to be legible, and not create clutter. Most fonts are relative in size, so that users can use their personal display settings to suit their vision needs. On a standard display the font would appear between 10-12 point, but the size is scalable according to individual accessibility and display settings.

The glossary page is currently designed so as to print well from a plain black and white printer.

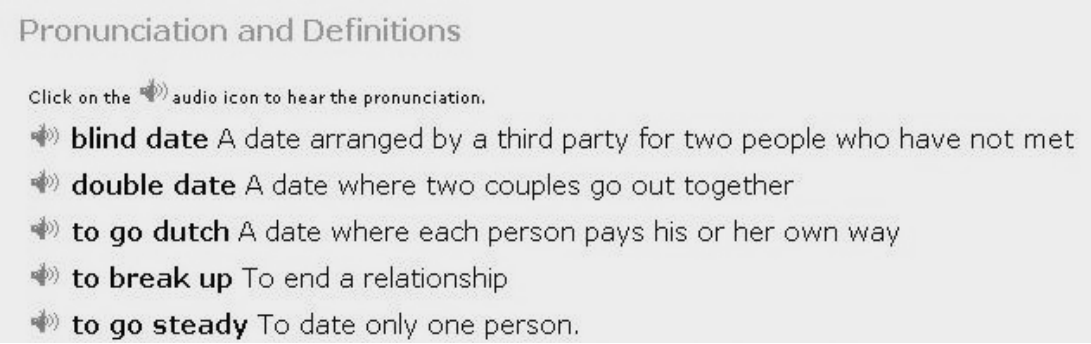


Figure 7. Screenshot of Glossary

Currently the lead word in a definition is set in bold in order to print clearly. If a separate printer-friendly version were made available, then it would be possible to make some other typography choices, such as

setting the lead word in a different color. However, this would require additional instructions, thereby complicating the design and increasing access time as well as bandwidth. However, a print version of that page is also available to students.

Another design choice was how to present the instructions. Instructions are kept to a minimum on each screen, but occasionally students may need additional instructions. In most cases, students will be given an orientation to the tutorial in a computer lab; however they should be able to access the tutorial on their own as well. Therefore a small help button will be added to each screen, in a consistent position, probably the standard position of top-right.

For practice activities, feedback for wrong answers is provided at the top-center of the screen, in a consistent position, so that students get accustomed to looking there for feedback. The practice exercises are a current exception to the left alignment. Their headings, feedback, and audio links are consistently in a central position. Setting it in a central position was the easiest way of calling attention to the feedback and audio links. Subsequent versions of the authoring tool, Hot Potatoes,

have made the feedback even more prominent, a boon for future authoring.

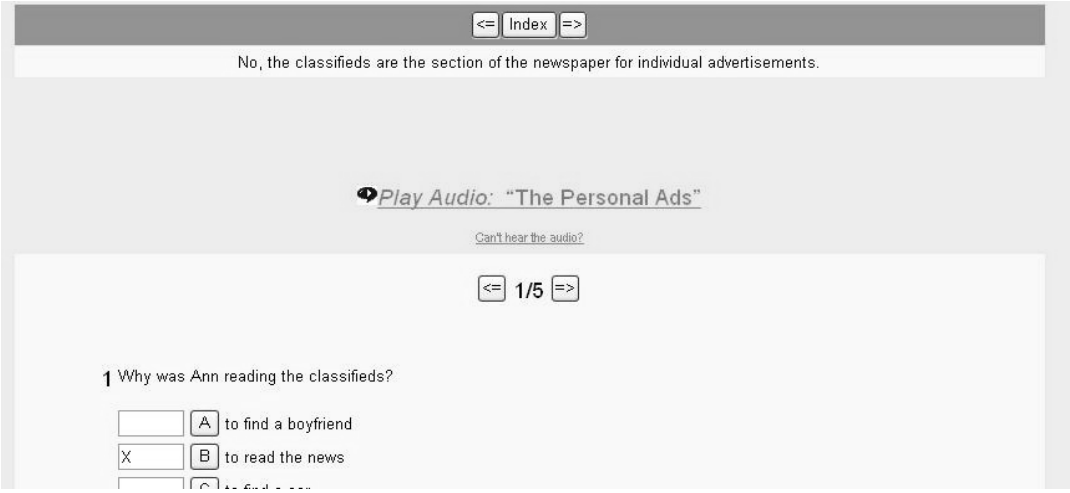


Figure 8. Screenshot of Feedback

Color

Colors were chosen to be bright and engaging to primarily a young adult audience. A limited color palette was selected because it is more "appealing and can add more of a feeling of sophistication and organization" (Williams & Tollett, 2000, p. 157). The main colors – a pale lime green and denim blue are not exactly opposite on the color wheel, but are almost, and do have good contrast.

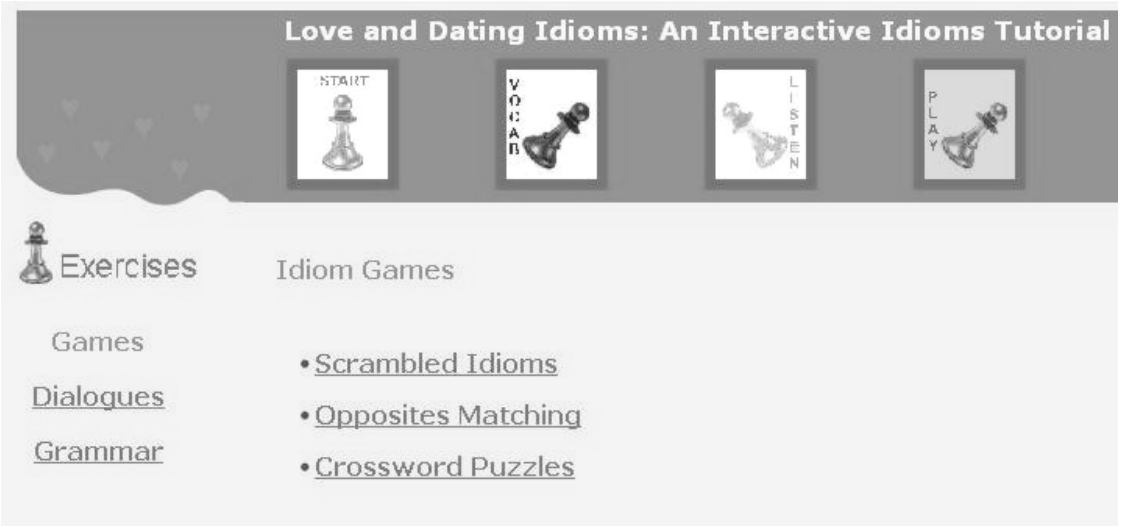


Figure 9. Screenshot of Color Contrast

Lime green (web color #CCFF99) is the background color, while denim blue (web color #6699CC) is the color for the color for headings and the background color for the navigation header. Both are web-safe colors, meaning that they are among the 216 colors which are "common to the browsers and operating systems of different computers" (Williams & Tollett, 2000, p. 167). Therefore, the crisp color will not be compromised by dithering which occurs when different colors are mixed to achieve a color not specified in the system color palette.

Lively background colors were chosen because simple fonts and few graphics are used, so visual appeal had to be added with the use of color. In order to appeal to the

visual-spatial modes of learning, more graphics will eventually be added. In that case, a monochromatic color scheme may be needed to reduce color conflicts. At this time, however, graphics are restricted due to the bandwidth limitations of the available server and users' dial-up modem connections. Avoiding noticeable delays in loading pages is a higher priority than the visual appeal of those pages.

Additional accents and previously visited hyperlinks are done in a cleanly contrasting purple (web color #9966CC). External hyperlinks were originally in purple, but later changed to the typical blue in order to be consistent with web standards. Originally, internal links were all purple, before and after visiting the link. The original reason for keeping internal links a constant color, rather than changing colors once clicked, was in order to give the feel of a multimedia tutorial rather than a usual website. It also encouraged learners to revisit pages they have looked at before, which may have more than one activity. However, this dictatorial behavior was changed in accord with research about autonomous learner preferences and Nielson's research showing web users need to be reminded which pages they have visited and which they have yet to visit.

Implementation

Although this stage is not specifically included in the Dick-Carey model it can be thought of as an extension of the previous stage -- developing and selecting instructional materials. The distinction is mostly one of primary materials versus incidentals -- supplemental materials, prerequisites, access issues, and support and training issues. While, these issues should be thought of throughout the design process, it is critical to reconsider them before it concludes.

Hardware and Software Support

The website itself consists of web pages, audio recordings in WMA format, interactive exercises, and a discussion board for asynchronous communications.

The possibility of adding a chat feature for real-time discussion was discounted after considering hosting and abuse concerns. The computing resources that are needed for providing this include web hosting on a server which supports PHP. The resources needed for accessing it depend on the situation. There are two types of anticipated student access: individual access and computer lab access. Within each of these there are also two methods of access: with a CD or via the Internet. Individual access will require a Pentium-class computer

with a java-script enabled web-browser and a media player which supports WMA files, such a Windows Media Player. Obviously, the computer must have working sound, i.e., soundcard and speakers or headphones. Anyone with Internet access may access the URL of the hosted site. Students with a computer but no Internet access are given a CD version of the site. Students with no computer, or who prefer to use the school's computers, may use the computer lab.

The computer lab computers are mostly Pentium 4 class computers with Internet Explorer 6+ and Windows Media Player. They all have headphones. They have a high speed connection to the Internet, which would be helpful if a chat option is made available. There is also an instructor computer and overhead projector which is useful for the orientation to the tutorial.

As a classroom activity, students will also be asked to illustrate an idiom with art supplies or a graphics program. If the latter is selected, then a suitable graphics program is needed such as Adobe Illustrator. In addition, web hosting or blog hosting to share the finished products online may be desired.

Supplemental Handouts

Additional tools and materials will be available for download for offline use, including: mp3s of audio recordings, a printable PDF document listing idioms and definitions, and paper-based versions of a few classroom and homework exercises (Appendix B).

Technical Support

The tutorial is designed to require minimal support such that learners can do their own troubleshooting. In a classroom setting, the instructor can act as the main source of support for the students. If the tutorial is done in a computer lab setting, the only technical support needed is in setting up the following prerequisites: Internet access, software for playing MP3 files, and earphones for individual listening. The following hardware would be desirable, if available: an overhead projector for orientation, speakers for whole group listening, a splitter allowing multiple earphones on a single PC so students may work together at one computer.

Background and Prior Knowledge

During the course, students are taught idioms through traditional methods. After they are familiar with what idioms are and why they are useful, they begin consideration of methods of learning idioms.

Primary Access Method: Language Lab

Students are introduced to idioms through the tutorial and then complete various listening, comprehension, and vocabulary exercises created in part with Hot Potatoes.

At the beginning of the computer based unit, students are given a half-hour tour of the site and its features. Beyond this, the students themselves have served as support and review for each other. When needed, less computer savvy or lower-level students can be grouped with a more advanced student. Another method is to set times for specific tasks (Listening at 9:15, Discussion at 9:45, etc.) and conduct the orientation to that task immediately prior to doing it.

Typically, two hours of class time are spent on the unit in one hour increments. This is due to class scheduling and computer lab availability. To utilize all of the material, students will require more hours than this of independent study. Following the orientation, the first hour is used to build passive recognition of the idioms and attention to their form and phonology, and a class discussion of memory techniques in between brief memory exercises, spaced in 15-minute then 45-minute increments. The second hour is a follow-up to review

passive recognition and begin comprehension activities. This is a time when students are encouraged to work in pairs or groups of three, which most students find more interesting and helpful. From the beginning, a collaborative approach must be emphasized, particularly if the lab is designed in tight rows; when students enter the lab, they are encouraged to sit next to someone who they can work well with. The best set-up is one where three students can sit comfortably at one computer which has three headphones attached.

Training

Instead of a single site orientation, a more constructivist method of learning to use the activities in the tutorial is to integrate its exercises into a larger project. In their recipe book of computer assisted language learning (CALL) activities, Hardisty and Windeatt (1999) suggest using a sequencing program to introduce words for an "oral fluency activity" about proverbs (p. 106). For the first half of the lesson, students work in groups with one computer per group using a sequencing program, such as the Hot Potatoes JMix tool used in the tutorial. The same sequence can also be done with the idioms in the tutorial instead of proverbs, as described in the following table.

Table 10. Idioms Sequencing: Oral Fluency Activity

1. Write down as many idioms as possible to recall on the theme, individually.
2. Check these with the teacher and classmates.
3. Observe demonstration of how the sequencing exercise works.
4. Unscramble the idioms and write them down in a notebook.
5. Try to clarify the meaning of the idioms.
6. Discuss if similar idioms exist in other languages. If so, transliterate it into English.
7. Compare findings with other groups. Request explanation of any difficult idioms.
8. Discuss the reasons for cultural difference between idioms.

Once students are familiar with how to use the software, it is possible to use it for similar applications on other themes too.

Access Procedure

On the surface, this is a fairly traditional tutorial approach to language learning where students are presented with a set of idioms, dialogs providing context for those idioms, comprehension questions, practice activities, and finally discussion activities. Students are tested for idioms knowledge/recall with the same instrument immediately before and after the unit. The benefit of this simple approach is it provides students an easy to follow review reference and procedure to follow for learning other idioms. Moreover, the ability for students work out of class frees more class time for communicative extension

activities, such as student created dramas, interviews, and discussions using the idioms.

This unit is then followed by another one consisting of exactly the same types of activities and time constraints; however this one is following a constructivist approach. In this unit, they will select the theme for the idioms and then create a tutorial themselves. They will create dialogs, practice activities, and discussion questions using Hot Potatoes (the authoring tool) and this tutorial as a model.

Secondary Access Method: Independent Access

The tutorial is designed to be used autonomously for the purposes of basic familiarity and review.

Constructive Activities

There are many such extension activities possible for language learning presented in Appendix C.

Evaluation

Overview

Four types of formative evaluations were conducted to assess the usability of this website in meeting its objectives.

Develop Formative Evaluation

The first evaluation consisted of observational interviews, specifically addressing usability and design.

The second evaluation was a survey allowing free response on questions about usability, design, content, and general attitudes. The third evaluation studied the pedagogical effectiveness of the website using a Likert-type scale.

Develop Instruments

There was no instrument for either of the observational evaluations. Rather the Nielson observation methodology was used. For the quantitative evaluation, semantic differential questions were written. This Likert-type scale was chosen because it can quickly be completed with a minimum of language. This was helpful since the class could not spare much time for testing. Qualitative survey questions were written to be as brief and open-ended as possible.

Table 11. Quantitative Evaluation Questions

The number of idioms was… too few □ □ □ □ □ too many
1. The colors are… good-looking □ □ □ □ □ ugly
2. Following instructions was… easy □ □ □ □ □ difficult
3. Navigating (from one page to another page) was… easy □ □ □ □ □ difficult
4. Learning idioms on the website was… easy □ □ □ □ □ difficult
5. Learning idioms on the website was… fun □ □ □ □ □ boring
6. I liked learning idioms… on the website □ □ □ □ □ in class
7. It was easier to learn idioms… on the website □ □ □ □ □ in class
8. I want to use websites to learn idioms… more often □ □ □ □ □ less often

Table 12. Qualitative Survey Questions

1. What did you like most about the love idioms tutorial? Why?
2. What did you not like about the love idioms tutorial? Why?
3. What can be improved about the tutorial? How?
4. Which exercises did you like the most on the tutorial? Why?
5. Which exercises did you not like on the tutorial? Why?
6. How could the teacher help the students to learn from the tutorial?
7. What was your score on your final test? _____%

Conduct Formative Evaluation: Individual Observation

The first evaluation was conducted separately with two students. The first student, a woman, was rated at a high-intermediate level of English reading comprehension, but only a high-beginning level of fluency. Moreover, she was totally inexperienced with using the Internet, having done only the most basic of web surfing a few times prior to using the site. The second student, a teenaged boy, was at the high-intermediate levels of English comprehension and fluency. He was an experienced Internet user. Clearly, the first user was at a significant disadvantage in using a web-based approach to learning English idioms, both because of her lack of web experience and her lack of fluency and unfamiliarity with idiomatic English.

The purpose of this evaluation was to observe to students use the website and see how well they could follow its instructions and navigate. The students were each told to simply follow instructions and try to learn the idioms. The observations were scheduled to take an hour each. This was quite unrealistic given the amount of content; both observations ended up taking over an hour. After about 45 minutes, it was necessary to instruct them which pages to browse to, in order to have time to assess how they did with specific exercises, particularly the listening and the grammar exercises. The intent of the evaluation was simply to observe, take notes, and give guidance when requested. The students were told they could ask questions if they did not understand something, but otherwise to follow the web instructions.

Conduct Formative Evaluation: Whole Class Observation

The whole class evaluation took place with a whole class in a lab environment at the University of California Riverside Extension over a few class periods. The students were a mixture of levels from intermediate to advanced levels of fluency. All of the students were foreign visitors, the majority of whom were from Asian countries, primarily Japan, Taiwan, and Korea. It was meant to assess

the sufficiency of a demonstration for overcoming problems with the usability of the site. Students were first oriented to the website by using an overhead projector in the lab environment. Orientation consisted of showing them where to start, what could be found in each of the sections, and specifically how to use the flashcard activity because of its poor usability. Thereafter, a tally was kept of when students had problems and which page they were on when they requested it. The tally included both requests directly of the instructor and of peer advice.

Conduct Formative Evaluation: Quantitative Survey

The quantitative questionnaire was administered to a class of intermediate-level English language learners at the University of California Riverside Extension.

Conduct Formative Evaluation: Qualitative Survey

Qualitative impressions were also sought from the same group of students. This survey was done on the following day, so as not to spend too much time at once. This also allowed them time to think about the website between surveys. Students were given the evaluation five minutes before the end of class.

Results: Observational Evaluation

As expected the first student, with little Internet experience, required significant encouragement and guidance in using the website. Surprisingly, she did not require as much guidance navigating as she did understanding the written instructions. In some cases, she was perfectly capable of understanding the instructions, but ignored them until they were pointed out. In order to overcome the aversion to reading instructions, they can be replaced with visual cues indicating the nature of the different exercises and perhaps more examples of how the exercises work. Without such modifications, students at this level will not be able to work independently. Appropriate to her level and needs, she was most interested in the pronunciation and listening exercises, and also had the least problem figuring these out without much guidance or reminders. Likewise, the matching activity just required a brief orientation before she was working zestfully and independently. On the other hand, the flashcards activity -- the first activity encountered on the site, required repeated explanation before she got the concept that one of the buttons deletes the card while the other keeps it for later review. This took a couple rounds of demonstration to establish. Even after she got

it, she seemed unconfident about which button to press to keep the card and which to press to delete.

Likewise, the second student also required an explanation of how to use the flashcards activity, but did not need reminders once shown how it worked. He did not have significant problems following instructions on any of the other areas of the site. On a couple of occasions, such as with the first listening exercise, he wanted help but when encouraged to try for himself he was able to do the exercise. With the exception of the flashcards exercise, it appears that an intermediate level student who has web experience will not experience much difficulty using the website independently.

Results of Whole Class Observation

The whole class evaluation revealed a less positive view than the individual evaluations. For about half of the students, the initial orientation to the website was all they needed to have a successful learning experience. Nonetheless, final tally results showed that there was no exercise which every student understood how to do. There was always someone who required some help, if only from a classmate, to show him what the point or procedure of the exercise was.

The need for assistance again pointed out the need for demonstration videos or a clearer design if the site were to be used independently. Nonetheless, less than 10% of tallies were questions directly to the instructor, so it did work well for a classroom environment where students can cooperate and help each other. Therefore, in the classroom environment demonstration videos are not imperative.

Two exceptions were the aforementioned flashcards and the listening section. Enough students had overlooked the listening feedback that it was necessary to stop the entire class and show where to look for feedback, using the overhead projector. Although the students were following the instructions on the exercise without difficulty, many of them had not noticed that there was feedback displayed about incorrect answers. This is something that would best be fixed by a redesign placing the feedback in a more prominent position. However, for in-class use, it is adequate to point out where to look for the feedback. On the other hand, explaining the flashcards activity was unnecessarily time consuming for such a simple exercises. Moreover there were still a few students who didn't catch on to how it worked until a couple rounds of independent practice, even though the

flashcards activity was demonstrated in the beginning. Like the listening feedback, this exercise does not require better instructions or a demo insomuch as a redesign with new buttons and a setup which makes a clearer analogy to a pile of flashcards.

Written Evaluations Free-Response Questionnaire

This survey (Appendix D) assessed attitudes of a group of intermediate level English language learners (ELLs) and linked these to their test scores. Overall, it was found that all but a few of the students enjoyed learning via the web-interface and were successful in learning the idioms. Nearly half of the students achieved a perfect score on the final test, while 75% of students achieved a perfect score or missed only one question. Among the 25% of students who missed more than one question, the most significant commonality among their reported attitudes was their lack of comfort with the user interface (UI).

Results indicated that all but one student was highly motivated by the media and interactivity. One student preferred the traditional classroom work and three students expressed the desire to work more in groups. Since it was not possible to do follow-up interviews, it is not known whether they would have been interested in

using the computers in groups. Although, they were not restricted from doing this at any point except during testing, only a few students in each class took advantage of this to actually work together on the same exercises. The prevalent method was to ask for help or advice from peers or the teacher with one's own exercise, rather than actually working collaboratively. Of the three students who said they preferred to work in groups, two scored 100% on the test and the third one scored 85% (missed 2 out of 13), which is still quite good. So, it seems that the preference for group work did not turn out to be detrimental in the adjustment to working online. Moreover, this is something that can easily be allowed by the teacher, if not quite so easily accommodated by the seating and arrangement of the computer lab.

On the other hand, the level of comfort with the UI was more significantly correlated to test results. While many (9) users had complaints or suggestions about specific aspects of the UI, only five (5) of these students found the interface truly a hindrance (as characterized by phrases like "difficult to use" or "couldn't find" or "didn't understand what to do"). On average these five users scored 67% as compared to the overall average of 86%. In fact these were the only users

to score below 85%. It is possible that these users may have spent more time trying to navigate and follow instructions than actually doing the exercises. This is a hypothesis which it would be necessary to test with another study which includes subject observation and a record of hours spent on which exercises. Another possibility is that their level of English was simply lower than the other students, and that the idioms would have been more difficult for them even if the instructions were clear.

Written Evaluation Using Quantitative Scale

In responding to the survey consisting of questions using a semantic differential scale (Appendix D), there were more students who said they preferred "learning idioms on the website" than there were students who preferred "learning idioms in class." The distinction here was intended to be whether students preferred spending class time using the multimedia website or spending that time using traditional classroom methods. While 44% of respondents indicated a preference for the website, only 25% had a preference for learning in class. Significantly, 31% of the students had no preference either way. Of course, some of this may be ascribed to the novelty of learning online, so a longer and more nuanced study would

be required to account for this element. Nonetheless, all of the students except for one (that is, 94% of students who responded to all instruments) said they would like to use websites more often. Of these, 80% had a strong preference for using websites more often. In retrospect, it would have been interesting to apprehend to what extent students preferred using the website during class time and to what extent they preferred using it as a supplement out of class, by asking the following questions:

- I would have liked to spend (more class time ***** less class time) on the website?
- Out of class, I spent (0 – 5) hours on the website?
- Out of class, I intend to spend (0 - 5+) hours on the website?

Summative Evaluation

In order to easily track progress, a single test was developed for both pre-testing and post-testing of Level 1 idioms, with the order of questions merely rearranged (Appendix E). In the event that students try to memorize pre-test material for the post-test, they are essentially memorizing the definitions, which is not undesirable. In fact, the test has been used to give the learners feedback about their learning progress. Since this trial run of the

test was simply for the learner's benefit, testing protocols were not followed and data was not collected. Following the additional rounds of formative usability evaluation and changes, the tutorial will be implemented formally and a summative evaluation of test results and learning will be further developed.

Revise Instruction

The formative evaluation results pointed to various usability problems, which were addressed within technical means in subsequent revisions. Moreover, a major affective problem emerged – some learners did not enjoy learning independently at the computer. A question arose: What accommodations can be made by and for less independent learners? It must also be considered whether online learning is suitable for everyone; it may be some learners will never enjoy it.

Summary

In summary, the current design is effective in meeting the goals of making memorizing and learning idioms more interesting and successful. It could be more efficient in reducing time spent studying specific idioms. In order to use the website efficiently in a classroom environment, adjustments were made to the user-interface,

including dividing the site into three levels. This made it easier to assess problems with content for particular idioms or with particular levels of English ability.

Clearer instructions and better visual indications of the affordances on a page may also help learners whose level of English is lower than the other students. Learners at a slightly lower level of English might also be more successful with the website if demonstration videos were added.

The time spent learning the activities and completing tasks is greatly increased by unfamiliarity with the medium. Therefore it is necessary to conduct further observations in order to obtain more reasonable time frames for completion of each level. Further study of which activities are most effective for practicing particular types of idioms could also be used to reduce the number of activities needed to learn each idiom.

Following the usability analysis, substantial changes were made including redesigning the navigation system. At the next opportunity, further usability analysis will be conducted to discover additional problems users may have in efficiently navigating the tutorial. A focus group will also be convened to assess the appropriateness of the tasks, exercises, and instructions for each level. As per

the Dick-Carey design model, this will continue in an iterative manner until the product meets all instructional goals for the widest possible audience.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Theories, studies, assessments, quizzes, etc. all served as crucial reference points in answering the question that nags every teacher "Am I doing the best that I can do?" However ardent the desire, it is not truly possible to help someone else learn because the work needed for learning must be processed in the individual's own mind. The journey can be shared, but the process cannot. The most an instructor can hope for is that by providing the best input and guidance possible, that students will be inspired to rise to the challenges that face them. Ultimately, the answer to the question does not lie in the research that guides instruction, but rather in the real life outcomes of the learners and in enjoying the craft of teaching.

Conclusions

The conclusions extracted from the project follow.

1. A tutorial can be an effective way of learning idioms autonomously. Students were able to obtain input, answer comprehension questions, and use skills at their own pace.

2. Learners enjoyed the theme, interactivity, and flexibility. The interactivity makes the exercises more enjoyable to the target audience than traditional, and even similar, classroom exercises.
3. Learners need professional guidance in vocabulary acquisition strategies. The tutorial did not equip students with these, but it did provide models of these strategies and freed the instructor to elaborate upon them rather than deliver input.
4. Learners benefit from opportunities to refine their understanding of idioms through discussion and extension projects.
5. The computer lab setting inhibits students from communicating naturally, however the tutorial effectively prepared students for communicative activities back in the classroom.

Recommendations

Many improvements could be made in the area of motivation, which are not possible due to technical limitations. Per Keller's ARCs model, it would be desirable to add more positive feedback and interactivity.

Additional feedback explaining incorrect answers would help students learning autonomously. These features are limited not by imagination or theory, but lack of multimedia design expertise and resources.

The technical inability to turn the computer into a cheerleader is not altogether undesirable. It forced the researcher to look at other methods for motivating and regulating the progress of learners. Chief among these is goal setting. The use of goal setting rubrics and personal logs, as suggested by Gardner and Miller (1997) is worth trying in future classes.

Once the product is found to be usable for the majority of learners on an independent basis, it should be used as a template for student authored projects with idioms of other themes. These can serve as an opportunity for the teacher to observe student comprehension and memory processes and provide feedback. As a bonus, it would provide students with a large database of idiom materials created by their peers.

Summary

The experience of designing a tutorial to serve learners with a constant availability and individual feedback that an instructor cannot provide has been

interesting, both in terms of its successes and frustrations. It is reassuring to know that there are some things a tutorial cannot do as easily or as well as a tutor, as well as relieving to know that there are some repetitive tasks that can be relegated out of the language classroom.

APPENDIX A

CD OF PROJECT

APPENDIX B

WORKSHEETS

Transparent vs. Opaque Idioms

Instructions: Select 2 of the idioms from this unit. Read your idiom to the group; listen to others in your group. For each idiom, decide if it is transparent or opaque. Write it down under the appropriate column.

Can you understand the idiom without seeing the definition?
Can you guess what it means?
Can you guess what it means from looking at the pictures?
Is it similar to an idiom in your language?

Yes. ↓	No. ↓
Transparent	**Opaque**

Name: _____ Date: _____

Idioms Log (Advanced)

Write down a couple of the idioms you learn each day, in and out of class. Choose idioms which are most useful to you. If you are not sure what type of idiom it is, use pencil to circle more than one type. It is possible for an idiom to be more than one type. For example, most metaphors are also transparent. Some phrasal verbs are literal, for example, "take out the trash." The literal usage is not really an idiom, but you may write it in your log if you wish.

Idiom	"In other words" / Definition
a)	
Type of Idiom: Transparent Opaque Phrasal Verb (Separable? Y / N) Literal/Not Idiom? Proverb Slang Euphemism Simile/Metaphor Cliché/Expression	
Where seen?	
Examples:	
b)	
Type of Idiom: Transparent Opaque Phrasal Verb (Separable? Y / N) Literal/Not Idiom? Proverb Slang Euphemism Simile/Metaphor Cliché/Expression	
Where seen?	
Examples:	
c)	
Type of Idiom: Transparent Opaque Phrasal Verb (Separable? Y / N) Literal/Not Idiom? Proverb Slang Euphemism Simile/Metaphor Cliché/Expression	
Where seen?	
Examples:	
d)	
Type of Idiom: Transparent Opaque Phrasal Verb (Separable? Y / N) Literal/Not Idiom? Proverb Slang Euphemism Simile/Metaphor Cliché/Expression	
Where seen?	
Examples:	

Name: _____ Date: _____

Idioms Log (Basic)

Write down a few idioms you learn each day, both in and out of class.
Choose idioms which are most useful to you.
"In other words" -- What does the idiom mean? What is its definition?
Example -- Write a sentence or example for each idiom. Give context, so you can understand it.

Idiom	"In other words"
a) *Make small talk* **Transparent / Opaque**	
Where found? *In class*	**Example:** *I am very good at making conversation at parties. I can make small talk about many topics – sports, the weather, and music.*
b) _____ **Transparent / Opaque**	
Where found?	**Example:**
c) _____ **Transparent / Opaque**	
Where found?	**Example:**
d) _____ **Transparent / Opaque**	
Where found?	**Example:**
e) _____ **Transparent / Opaque**	
Where found?	**Example:**
f) _____ **Transparent / Opaque**	
Where found?	**Example:**

Idioms Booklet (Brainstorm)

We are going to make a book of tips for learning idioms for ourselves and other idioms students. I will put the information from all groups in your idioms booklet.

For each situation below, discuss:
How did you come to understand the idioms?
What helped you understand?
What tools or resources did you use?
What strategies or methods did you use?
What practice activities did you do to help remember them?

How did you learn the idioms during class? **Tips for learning all idioms**	*How did you learn the love idioms website?* **Tips for learning idioms thematically**
How did you learn the idioms found outside of class for your idioms log? **Tips for looking up idioms independently**	*How can you learn slang and common expressions?* **Tips for learning slang and common expressions**

Our Idioms Booklet

Congratulations on becoming an expert on your own learning. Refer to this page in your booklet whenever you need study ideas.

For each situation below, discuss:
How did you come to understand the idioms?
What helped you understand?
What tools or resources did you use?
What strategies or methods did you use?
What practice activities and exercises did you do to help remember them?

Think about how you learned the idioms for in class.

Tips for learning all idioms

1. Analyze the original context of the idiom
2.
3. What is the purpose of the idiom? Why is an idiom used (instead of literal ideas)?
4.

Think about how you learned the idioms on the website.

Tips for learning idioms thematically

1.
2.
3.

Think about how you learned the idioms found outside of class for your idioms log .

Tips for looking up idioms independently

1.
2.
3.

Think about how you can learn slang and common expressions .

Tips for learning slang and common expressions

1.
2.
3.

APPENDIX C

SUPPLEMENTARY ACTIVITIES

CONSTRUCTIVE ACTIVITIES FOR IDIOM FLUENCY

Adapted from: Hardisty, D. & Windeatt, S. (1999). *CALL*. Oxford University Press.

	Activity descriptions	Possible Activity for Idioms
Information-transfer	Students transfer information "from one medium to another, from student to student, or from group to group. Students listen to a tape-recording of a story and then sequence the events of the story, or match sentences spoken with the characters in a story"	In small groups, students write a story using idioms of their choice, then, in private, record it (preferably digitally). The story must not proceed chronologically; instead events should be mixed up in the story. After recording, students exchange recordings with another group, who must transcribe the story in chronological order, also noting which character in the dialogue spoke which idioms.
Information -gap	One student, or group of students, need information from classmates to complete the activity. They mingle, asking/answering questions.	Each student privately writes a sentence about himself using an idiom, to be shared the next day. The instructor corrects these and makes a sheet titled 'Who am I?' of all of the sentences. Students try to discover who each sentence is about.
Opinion-gap: created by teacher	Invoke different opinions about how to solve a problem, a simulation, a maze, or how to end a story. Assign roles to students ('You are in favor of X'). Working in pairs, one student writes his answer and reasoning. The other writes how she predicts what her partner will answer and why she thinks so. Finally, students share their points of view in a whole class discussion.	Prepare a personal dilemma using one of the idioms about which you want advice. It is better if it is a real dilemma (past or present). For example, "I saw the husband of my close friend at a restaurant with another woman. They were sitting very close. It looked romantic. Should I tell her that he might be cheating on her?" While students are writing their answers, go around the room to make sure both pros and cons are represented. If not, then ask one or two students to take the other position for the sake of argument.
by student	Students write problems for opinion gaps using their own experience, or their imagination	Save class time by assigning this for homework. Inform them that in the next class, they will share their problems in the same activity.
Interviews	In pairs, students pick a celebrity of their choice, whom the will "interview". (The instructor is prepared to suggest some popular celebrities whose lives fit the subject matter).	Students prepare questions and answers, obtaining data from the Internet or collected tabloid articles. As in tabloids, entertainment is desired over accuracy. After the teacher has checked the script, students rehearse. After rehearsal, students perform their interviews live, using a video camera and "talk show" setting. Students receive feedback from their peers and the instructor. Finally, they review their video outside of class.
Talk show	Students take on the roles of talk show host and guests for a discussion of a popular problem	Discuss issues related to the theme. Require each student to use 3 or more idioms. See the problems presented in the dialogues for ideas for show topics.
Drama	Dramas are written about situations which are easy to relate to. Role-play topics for common situations.	The dialogues in the tutorial can be used as the script for in class dramas.
Games	Use a game-board to play a communicative question and answer game. Students roll & move forward after answering questions.	Use the tutorial discussion questions. Answers must also use idioms. (For this purpose, a commercial product called the "Language of Love" is used in the American Culture class.)
Meta-cognitive Discussion	In small groups, students discuss their understandings and mental classifications.	Which idioms are negative? Which idioms are positive? Which two idioms have similar meanings? How are they similar? How do they differ? Pick an idiom. What is another way to say the same idea? Which idioms have opposite meanings? "To go Dutch" is and idiom which uses a confusing image and metaphor. Which other idioms have confusing images or opaque metaphors? The idiom "Blind date" has a clear image and metaphor. What other idioms have clear images or transparent metaphors?

Love Idioms: Activities

Recognition and Basic Comprehension Activities: Total Physical Response

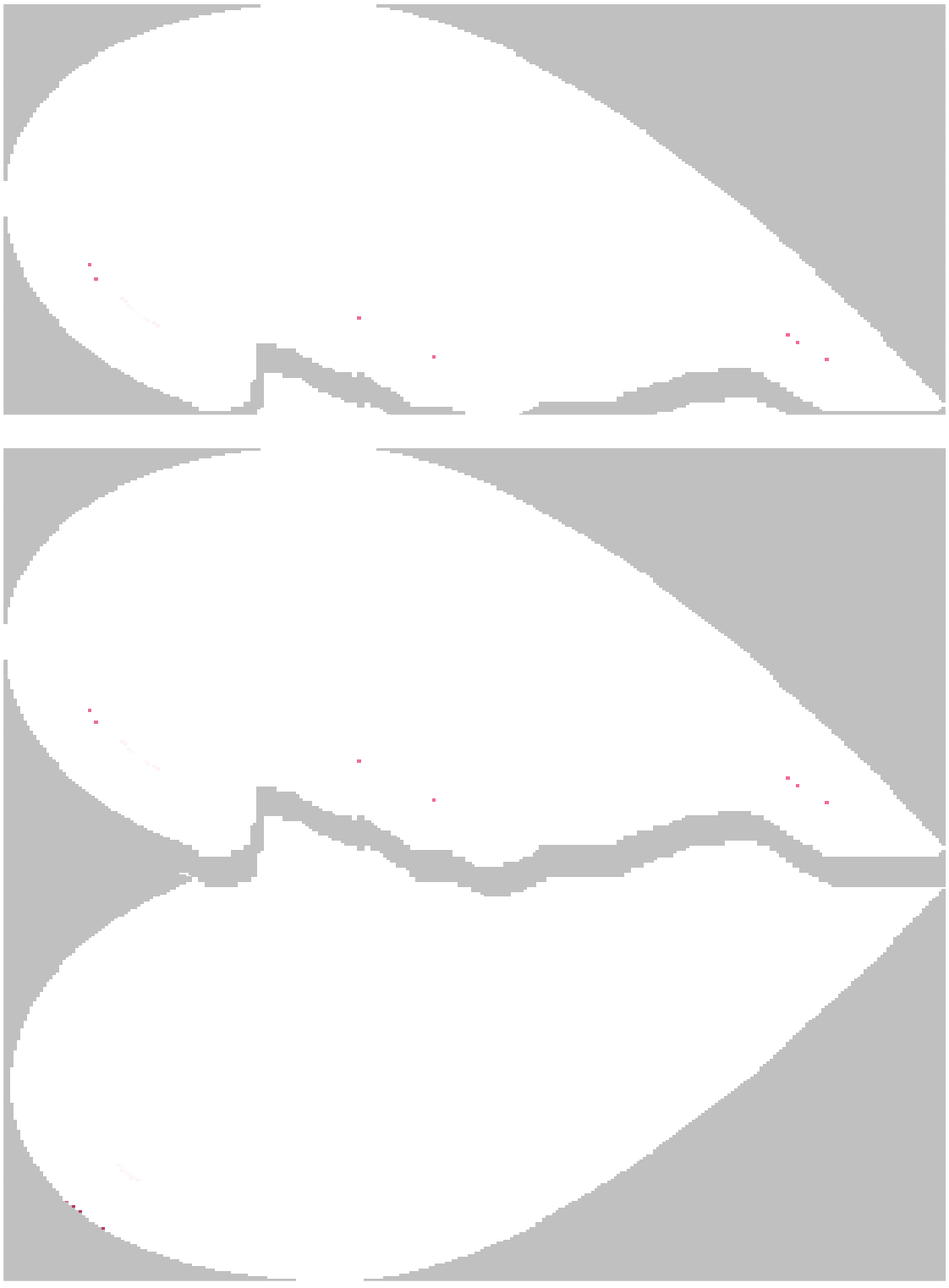
1. Fly swatter game. “Divide the class into two teams. First, scatter the first half of all the idioms on the board. For example, "blind", "get", etc. The first person from each team is given the second half of an idiom. They must race to the board and stick it to complete the idiom. For example, if the students have "date" they must run and stick it beside "blind." The student to complete the idiom first gets the point” (MacKay, 2004). An adaptation of this is to use the “broken hearts” template and have students write half of each idiom on each half of the heart, doing the second half twice, then play as described. This takes a bit more work to explain, but is beneficial for students to learn how they can create their own practice activities.

2. Matching. Using 2x2 cards, write an idiom on each card and a sentence using the idiom on cards of another color. In small groups, students match the idioms with the sentences.

3. Concentration. Using 2x2 cards, write half of an idiom on each card and the other half on cards of another color. Turn all idiom cards face side down and align in a grid. Students take turns turning over two cards. When the cards form an idiom, the student may remove them and put them in a pile.

4. Charades. Divide the class into groups. All idioms are placed in a hat. Students pick one randomly and students must demonstrate the idiom until their teammates guess it. If students are shy, the charades may be done in pairs. Students cannot speak during the charades, except to guess the idiom.

5. Drawing. Pick your favorite idiom. Write it on side of a piece of paper. On the other side, draw a cartoon of its literal meaning. Under the picture, write a caption clearly using the idiom and the figurative meaning. Cover the idiom with a strip of paper show your picture to other students. Ask them to guess the idiom.



APPENDIX D

SURVEYS

QUANTITATIVE SURVEY

ON LOVE IDIOMS TUTORIAL

1. The number of idioms was… **too few** O O O O O **too many**
2. The colors are… **good-looking** O O O O O **ugly**
3. Following instructions was… **easy** O O O O O **difficult**
4. Navigating (going from one page to another page) … **easy** O O O O O **difficult**
5. Learning idioms on the website was… **easy** O O O O O **difficult**
6. Learning idioms on the website was… **fun** O O O O O **boring**
7. I liked learning idioms… **on the website** O O O O O **in class**
8. It was easier to learn idioms… **on the website** O O O O O **in class**
9. I want to use websites to learn idioms… **more often** O O O O O **less often**

QUALITATIVE SURVEY

ON LOVE IDIOMS TUTORIAL

1. What did you like most about the love idioms tutorial? Why?

2. What did you not like about the love idioms tutorial? Why?

3. What can be improved about the tutorial? How?

4. Which exercises did you like the most on the tutorial? Why?

5. Which exercises did you not like on the tutorial? Why?

6. How could the teacher help the students more to learn from the tutorial?

7. What was your score on your final test? _____

APPENDIX E

LEVEL 1 PRE-TEST AND POST-TEST

TESTING PROTOCOL

These are the idioms being tested at the beginner level:

- double date
- go dutch
- blind date
- break up
- go steady

Students will be given exactly the same attached test as both their pre-test and post-test, except that the questions are in a different order on the post-test. The test has been designed to elicit an obligatory form by providing enough context for their to be only one idiom which clearly fits (if they know it).

Phase 1 (7 minutes)-- Testing active recall:
The instructor will not provide any hints, assistance, or choices for the idioms. In the stage if they write the correct idiom, it is because they actively remember it from prior experience.

Phase 2 (2 minutes) -- Checking passive recall:
After 7 minutes the instructor will stop the test, instruct them to put away their pens, and provide them with a different color pen (green). Then the instructor will provide them with a list of the idioms on the board. They will be given 2 more minutes to fill in the idioms into the conversation. After 2 minutes, papers and pens will be collected.

LOVE IDIOMS (PRE-TEST)

Instructions:
Write the idiom to complete the sentence in the blank space.

1. What idiom means a date where two couples go out together?

Emi: What are you going to do this weekend?
Junko: I am going to a movie with my boyfriend. What are you doing?
Emi: My boyfriend and I are going to a movie too.
Junko: Maybe all four of us should go together on a _____ date.
Emi: That sounds like fun.

2. What idiom means date where each person pays for himself or herself?

Nobu: Emi, will you go to dinner with me on Friday?
Emi: Okay Nobu, but I don't want you to pay for dinner. Let's go _____., OK? I want to pay for myself.

3. What idiom means a date between two people who have never met, usually arranged by a third person?

Mami: What are you doing after class?
Tomoko: I'm meeting someone for coffee.
Mami: Do I know him?
Tomoko: No. I don't know him either. He's my brother's friend.
Mami: You never met him?
Tomoko: No. We talked on the Internet. My brother gave him my email address.
Mami: So now you're going on a _____ date?
Tomoko: Yes, this is the first time I'll see him.

4. What idiom means to end a relationship?

Ryoko: Hi Noriko. What are you doing?
Noriko: I'm writing a letter to Kazu. I want to end our relationship.
Ryoko: You mean your boyfriend Kazu?
Noriko: Yes, he was my boyfriend, but now I want to _____ up with him.
Ryoko: You want to stop dating Kazu?
Noriko: That's right.

5. What idiom means to date only one person?

Yuko: Thank you for dinner, Ken. The movie was good too.
Ken: My pleasure Yuko. What are you doing next Friday?
Yuko: Friday? Oh, sorry, I have another date.
Ken: Another date? With who?
Yuko: A guy from work.
Ken: Yuko, I don't want you to date other men.
Yuko: You want me to date only you?
Ken: That's right. Let's go _____, OK?
Yuko: You won't go out with other women either?
Ken: No, I won't. I'll only date you.

LOVE IDIOMS (POST-TEST)

Instructions:
Write the idiom to complete the sentence in the blank space.

1. What idiom means to end a relationship?

Ryoko: Hi Noriko. What are you doing?
Noriko: I'm writing a letter to Kazu. I want to end our relationship.
Ryoko: You mean your boyfriend Kazu?
Noriko: Yes, he was my boyfriend, but now I want to _____ up with him.
Ryoko: You want to stop dating Kazu?
Noriko: That's right.

2. What idiom means a date between two people who have never met, usually arranged by a third person?

Mami: What are you doing after class?
Tomoko: I'm meeting someone for coffee.
Mami: Do I know him?
Tomoko: No. I don't know him either. He's my brother's friend.
Mami: You never met him?
Tomoko: No. We talked on the Internet. My brother gave him my email address.
Mami: So now you're going on a _____ date?
Tomoko: Yes, this is the first time I'll see him.

3. What idiom means date where each person pays for himself or herself?

Nobu: Emi, will you go to dinner with me on Friday?
Emi: Okay Nobu, but I don't want you to pay for dinner. Let's go _____., OK? I want to pay for myself.

4. What idiom means to date only one person?

Yuko: Thank you for dinner, Ken. The movie was good too.
Ken: My pleasure Yuko. What are you doing next Friday?
Yuko: Friday? Oh, sorry, I have another date.
Ken: Another date? With who?
Yuko: A guy from work.
Ken: Yuko, I don't want you to date other men.
Yuko: You want me to date only you?
Ken: That's right. Let's go _____, OK?
Yuko: You won't go out with other women either?
Ken: No, I won't. I'll only date you.

5. What idiom means a date where two couples go out together?

Emi: What are you going to do this weekend?
Junko: I am going to a movie with my boyfriend. What are you doing?
Emi: My boyfriend and I are going to a movie too.
Junko: Maybe all four of us should go together on a _____ date.
Emi: That sounds like fun.

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