Modular PhD in Applied Linguistics

Module 3

Using Cognitive Linguistics to Teach Metaphor and Metonymy in an EFL and an ESL Context

by

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ABSTRACT

Developing an ability to understand and use metaphor is essential for successful language learning. While teachers/researchers have examined the effects of metaphor training in language classrooms, they have rarely embedded the instruction into a four skills language curriculum. To fill this gap, this study explores the effectiveness of metaphor instruction in developing reading, writing, listening, and speaking skills for both EFL and ESL learners. During this two-part study, the pre-test and post-test scores of an experimental group of 11 EFL students who received metaphor and metonymy instruction in the four skills were compared with a control group of 10 EFL students. Next, the test scores of two experimental groups of 11-12 ESL students who received metaphor and metonymy instruction in either reading and writing or listening and speaking were compared with two control groups of 12 ESL students. The thesis finds that explicit metaphor instruction can lead to modest improvements for some aspects of metaphor use. However, as different task types, genres, and topics were found to require different types and amounts of metaphor and metonymy use, the thesis also finds that it is essential to consider the nature of the communicative task when developing metaphor instruction.

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1. Literature Review

1.1 Cognitive linguistics introduction

At its core, cognitive linguistics examines the link between language and thought. Cognitive linguistics originally arose as a reaction to generative grammar, which views language as governed by a system of rules that is basically independent of meaning and context. In contrast, cognitive linguists emphasize meaning, believing that linguistic structure is the direct result of cognition since language choices reflect a particular way of conceptualizing the world (Lee, 2005, p. 1). While generative grammarians subscribe to the concept of Universal Grammar, cognitivists believe that there is no specific organ or mechanism for learning language and that language, like other knowledge, is inherently rooted in cognition (ibid). Moreover, cognitive linguistics is not a specific theory; rather it can be considered "an approach that has adopted a common set of guiding principles, assumptions, and perceptions which have led to a diverse range of complementary, overlapping (and sometimes competing) theories" (Evans & Green, 2006, p. 3). In cognitive linguistics, language is believed to reflect "fundamental properties" and "design features" of the mind and as such, provides "insights into the nature, structure, and organization of thoughts and ideas" (Evans & Green, 2006, p. 5).

Furthermore, as an approach, cognitive linguistics places special emphasis on meaning and context, acknowledging variation across speakers of the same language in the way they perceive, conceptualize, and interpret a particular situation (Lee, 2005, p. 12). Cognitive linguists focus on how particular situations can be "construed" in various ways through different linguistic encodings and how different perspectives and foregrounding can lead to alternate construals of the same event (Lee, 2005, pp. 2-5). Furthermore, our "frames," or conceptual and cultural

background knowledge, shape the way we use and interpret language (Lee, 2005, p. 9). This suggests that words should be viewed as "tools for causing speakers to access specific parts of their knowledge base," and that meaning is "a product of the interaction between an utterance and a human being's knowledge base" (Lee, 2005, pp. 5-12). In addition, we understand, interpret, and express ideas linguistically through both "cognitive models" of stored knowledge bases about a certain field and "cultural models" of cultural information of the context in which an idea is expressed (Ungerer & Schmid, 2006, pp. 49-52). This allows cognitive linguistics to account for both inter-individual differences through cognitive models as well as uniting aspects of language shared by a collective group of people through cultural models (ibid). Cognitive linguists' focus on meaning lends an important relativist dimension to the process of communication by acknowledging variation, even among speakers of the same language, in the way people interpret and linguistically code particular situations (Lee, 2005, p. 12).

As a result of this focus on meaning and perspective, the field of cognitive linguistics places a special emphasis on figurative thinking and metaphorical language as "powerful tools for our conceptualization of the world" (Ungerer & Schmid, 2006, p. 114). Since cognitive linguists believe that linguistic features reveal other aspects of human cognition, metaphorical language is viewed not merely as a stylistic way of expressing ideas, but rather as a reflection of figurative thought about the world (Grady, 2007, p. 188; Ungerer & Schmid, 2006, p. 118). As Lee (2005) notes, metaphor is clear evidence of "the cognitive claim that language and thought are inextricably intertwined" (p. 7). This is because metaphors are proof that some aspects of our experiences are associated with others "for reasons that reflect basic aspects of perception, thought, and possibly neurological organization" (Grady, 2007, p. 188). Moreover, cognitive linguists do not believe that metaphor is a purely linguistic phenomenon, but rather a pattern of

figurative thinking that can also be expressed nonverbally through pictures and gestures (Grady, 2007, p. 189). Furthermore, the use of different metaphors represent different construals, or ways of thinking, about a particular phenomenon (Lee, 2005, p. 6). This means that understanding, interpreting, and employing metaphorical language poses a significant challenge for L2 learners, who must not only learn new linguistic information, but also alternative ways to construe events in their second language.

Clearly, the discipline of cognitive linguistics provides insights and implications for second language instruction. Considering both the importance of metaphor in language and the challenge it poses for L2 learners, the aim of this study is to investigate the effects of direct metaphor instruction from a cognitive linguistics viewpoint on students in both an EFL and an ESL context. As background to the study, the following section will first review some key concepts in the study of metaphorical language from a cognitive linguistics perspective, including a definition of metaphor and metonymy, Conceptual Metaphor Theory, and Blending theory. Next, previous research on metaphor and second language learners will be presented, including studies on cross-cultural and linguistic comparisons as well as specific challenges L2 learners face when confronted with metaphorical language in their second language. Finally, previous studies on teaching methodology and suggestions for teaching metaphor and metonymy will be discussed. While cognitive linguistics research points toward best practices in the language classroom, it is seldom applied directly to L2 teaching and materials development within a four skills language curriculum. This study aims to close this gap while building on previous research on explicitly teaching metaphor and metonymy to L2 students.

1.2 Cognitive linguistics and metaphor/metonymy

With its emphasis on cognition, perception, and meaning, much cognitive linguistics research focuses on studying metaphor and metonymy. This section will begin by defining exactly what metaphor and metonymy mean in the discipline of cognitive linguistics. Next, a discussion of Conceptual Metaphor Theory (CMT) will provide background and rationale for many of the materials and activities used in the current research study. Finally, Blending Theory will be presented as a supplemental explanation to CMT and further basis for the lessons used in this investigation. As the current study investigated the application of cognitive linguistics to the teaching of English for L2 learners, the aim of this section is not to prove the validity of one theory over another; rather, the goal is to provide a theoretical foundation for the teaching materials and classroom activities used in this research.

1.2.1 Definition of metaphor and metonymy

This study focused on metaphor in particular, which, at its most basic level, can be considered a device for "conceptualizing one domain of experience in terms of another" (Lee, 2005, p. 6). In other words, a metaphor is a way to use one idea or concept to understand another one. In addition to metaphor, the lessons in this investigation also included activities focusing on simile (which can be considered a type of direct metaphor, Steen et al., 2010a), personification (which is often viewed as a form of ontological metaphor, Lakoff & Johnson, 1980, p. 33), and metonymy. Each of these will be further discussed below.

For cognitivists, any time a word is used to express an idea other than its basic core meaning and can be understood through comparison with its basic meaning, it can be considered a metaphorical use of the word. As Deignan (2005) says, "a metaphor is a word or expression that is used to talk about an entity or quality other than that referred to by its core, or most basic

meaning. This non-core use expresses a perceived relationship with the core meaning of the word, and in many cases between two semantic fields" (p. 34). Another way to identify metaphor is to consider the normal context or domain of the word. Metaphor is "the shift in the use of a word or phrase from the context or the domain in which it is expected to occur to another context or domain where it is not expected to occur, thereby causing semantic tension" (Charteris-Black, 2004, p. 21). In other words, metaphor involves mapping one idea or concept onto another in a way that deviates from the expected or core meaning of a particular word or phrase. Similarly, Grady (2007) emphasizes the cognitive function of metaphor, stating that metaphor refers to "a pattern of conceptual association, rather than to an individual metaphorical usage or a linguistic convention" (p. 188). That is, rather than being simply a linguistic expression, metaphors also encompass a way of thinking about and conceptualizing the world.

In addition, metaphorical expressions can be classified into "conventional" metaphors and "novel" metaphors according to their degree of "conventionality" (Kövecses, 2010, p. 33). Kövecses (2010) defines conventionality as "how well worn or how deeply entrenched a metaphor is in everyday use by ordinary people for everyday purposes" (ibid). Highly conventional metaphors may be so familiar to native speakers that they might not even notice their metaphoricity; rather, native speakers simply view them as "the most ordinary and natural ways" to talk about different topics (Kövecses, 2010, p. 34). However, conventional expressions may pose additional challenges for L2 learners as they represent not only well-worn, clichéd linguistic expressions but also deeply entrenched ways of thinking about a particular topic (ibid). Novel metaphors, in contrast, represent original ways to linguistically express ideas about a particular topic. While novel metaphors usually express more conventional conceptual metaphors in a language, we can also find examples of unconventional conceptual metaphors,

which give us new perspectives to interpret the world around us (see section 1.2.2 below for more information on conceptual metaphors). Kövecses (2010) gives the example of love, which is often expressed through more conventional conceptual metaphors like LOVE IS A JOURNEY; however, when two people's experiences fall outside of the range of conventional expressions, they may employ less-conventional conceptual metaphors like LOVE IS A COLLABORATIVE WORK OF ART to make sense of their unique experiences (p. 36). Like conventional metaphors, novel metaphors can be difficult for students to interpret, as they represent new ways of linguistically expressing an idea, and also to produce, as they require a great deal of language skill and finesse to create.

Steen et al. (2010a, 2010b) further distinguish between "indirect," "direct," and "implicit" metaphor. For indirect metaphors, the lexical word itself is used metaphorically, as in the example "he defends his claims well," while direct metaphors are comparisons that are explicitly expressed using a metaphor flag such as "like" or "as" (Steen et al., 2010a, p. 775). Finally, implicit metaphor is based on ellipsis or substitution, as in the example "to embark on such a step is not necessarily to succeed immediately in realizing it," in which the pronoun "it" replaces the metaphorically used word "step" (Steen et al., 2010a, p. 776). Steen et al. (2010a) emphasize that direct metaphor is deliberate in that "it intentionally and explicitly instructs addressees to set up a cross-domain comparison between the referent designated by the words in the discourse" (p. 786). They argue that due to its deliberateness, direct metaphor may be more salient to the addressee, causing people to believe that fiction contains more metaphorical language than academic writing since it contains more direct metaphor, even though academic writing contains more metaphor overall (ibid). Indeed, Moon (2008) found that as-similes using the form "(as) + ADJ + as + NOUN Group" occur quite infrequently even in the large corpus the

Bank of English (BoE). However, the collocational bond between the adjective and noun group of the vehicle along with the special link between similes and story-telling make these types of direct metaphor both easy to decode and functionally important for specific texts, text types, or contexts (ibid). In the current study, the term "simile" was used instead of "direct metaphor" since simile means a direct comparison using the metaphor flags "like" or "as" and was explicitly taught in the metaphor classes. Indirect and implicit metaphor were grouped together in the general category "metaphor related words" (see Section 2 for further discussion of methodology).

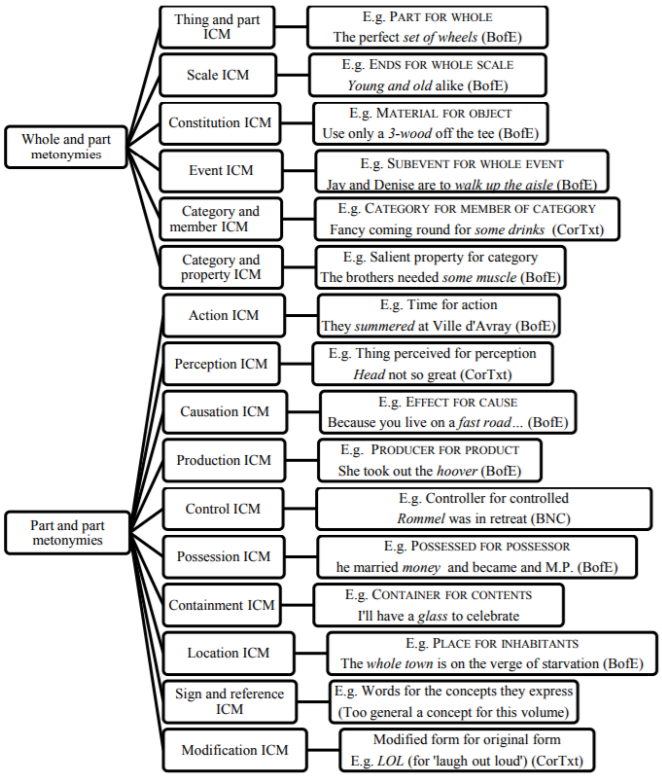
Another kind of metaphor relevant to this study is personification, which can be considered a type of ontological metaphor, or a metaphor in which abstract concepts are conceived of in terms of objects, substances, and containers (Lakoff & Johnson, 1980, p. 33). In the case of personification, human qualities are attributed to nonhuman entities so that abstract ideas are conceptualized as people. Kövecses (2010) explains that personification helps us understand abstract concepts through the use of "one of the best source domains we have – ourselves" (p. 39). Kövecses (2010) further explains how personification is common in both everyday discourse, in examples like "Life has cheated me" (p. 39) and in poetic language, such as through conceptualizations of time as a thief, a reaper, a devourer, a destroyer, an evaluator, and a pursuer (pp. 55-56). Similarly, Lakoff and Turner (1989) analyze poetic uses of personifications of DEATH. They claim that personifying death is compatible with other common conceptual metaphors, such as DEATH IS GOING TO A FINAL DESTINATION and DEATH IS LOSING A CONTEST AGAINST AN ADVERSARY, so that conceiving of death as an escort or an enemy fits within our overall conceptual framework (pp. 15-17). Dorst, Mulder, and Steen (2011) propose a typology including four different kinds of linguistic

personification: conventionalized personification, novel personification, default personification, and personification-with-metonymy. Conventionalized personification involves a human basic sense mapped onto a non-human contextual sense that can be found in the dictionary, while novel personification involves a human basic sense mapped onto a novel non-human contextual sense that cannot. Default personification applies to cases that can technically be interpreted in multiple ways but in which a human default sense is preferred, while personification-with-metonymy occurs when a human agent is replaced with a metonymically non-human agent (ibid). Like other types of metaphor, as personification involves both new ways of conceptualizing and linguistically expressing ideas, it can be more difficult for students to understand, interpret, and use in their L2, making it an appropriate topic to include in the metaphor classes in this study.

Metonymy, on the other hand, is "a cognitive process in which one conceptual element or entity (thing, event, property), the vehicle, provides mental access to another conceptual entity (thing, event, property), the target, within the same frame, domain, or idealized cognitive model (ICM)" (Kövecses, 2006, p. 99). Put more simply, metonymy is a "figure of language and thought in which one entity is used to refer to, or in cognitive linguistics terms 'provide access to' another entity to which it is somehow related" (Littlemore, 2015, p. 9). Moreover, metonymic thinking allows us to "put the large amount of information that is available about the world into a manageable form," and linguistic expressions of metonymy help us communicate more concisely and effectively (Littlemore, 2015, p. 7). Littlemore (2015) emphasizes the distinction between metaphor, which involves comparison between two unrelated domains, and metonymy, which uses one thing to mentally access something else to which it is closely related (pp. 9-10).

Radden and Kövecses (1999) divide metonymy into two main categories: whole and part metonymies and part and part metonymies, which can each be broken down into other smaller categories (see Figure 1 below). Knowledge of these taxonomies can be a good starting point for teachers designing metonymy instruction. In addition, while metonymy is often used as a kind of shorthand where one word or phrase stands for another, as in the example of using the "White House" to refer to the U.S. president or his administration, it serves many other communicative functions as well. In addition to this referential function, metonymy can be used to highlight or construe features of a particular phenomenon, to build discourse cohesion and coherence, to invoke complex information outside a text, and to help build relationships and establish discourse communities, as well as for more evaluative and creative purposes, such as in euphemism, hyperbole, irony, and vagueness (Littlemore, 2015). As with conventional metaphors, for L2 students metonymy poses special challenges, since "mastering collocations and recognizing their limits are as important in learning to deal with metonymy as they are in learning to deal with metaphor" (Littlemore & Low, 2006a, p. 19).

Figure 1: Key metonymy types in Radden and Kövecses, (1999) taxonomy (Littlemore, 2015, p. 23)



Moreover, like metaphor, metonymy can be divided into conventional and non-conventional metonyms. Deignan (2005) notes that conventional metonyms are "used to refer to a general class of entities, or to the same entity a number of times and in a number of contexts, rather than to one specific instance of an entity" (p. 58). Examples include "the palace" to refer to the administrative staff of the British royal family and "Downing Street," to refer to the British prime minister (ibid). As these conventional metonyms have well-established meanings, "hearers do not have to reconstruct the metonymic mapping on each occasion," but rather immediately understand the reference through well-established idealized cognitive models (ICMs) (ibid). In contrast, non-conventional metonyms do not have an established meaning, so they "can only be understood in the context in which they are uttered" (Deignan, 2005, p. 57). An often cited example is "The ham sandwich is sitting at table 20," in which a restaurant worker is referring to a customer by his food order, or "the ham sandwich" (ibid). Deignan (2005) notes that

conventional metonyms are usually associated with a general, relatively well-known and permanent feature, whereas the link for non-conventional metonyms is transitory, context-bound, and perhaps temporary (p. 58). Both conventional and non-conventional metonyms can be challenging for L2 learners as they not only represent new ways of linguistically expressing an idea, but may also rely on cultural information through ICMs with which the students are not familiar.

In summary, this particular research study focused on teaching metaphor, including both simile and personification, and metonymy. Metaphor, a way of "conceptualizing one domain of experience in terms of another" (Lee, 2005, p. 6), creates a discrepancy between the most basic meaning of a particular term or phrase and its intended meaning in a specific context. While metaphors can be either more "conventional" or more "novel," both types create difficulties for L2 learners. Furthermore, class activities in this study also targeted simile, which directly compares two domains using "like" or "as," and personification, in which human qualities or actions are attributed to nonhuman subjects. Finally, class instruction also included a focus on metonymy, which uses one entity to provide mental access to another part of the same domain. Next, how metaphor is viewed in cognitive linguistics will be further described in the following sections on Conceptual Metaphor Theory (CMT) and Blending Theory.

1.2.2 Conceptual Metaphor Theory (CMT)

As discussed in Module 1 of this thesis, an important revolution in cognitive linguistics came with the development of Conceptual Metaphor Theory (CMT), which was first proposed by Lakoff and Johnson (1980) in their influential work *Metaphors We Live By*. Rather than viewing metaphor merely as a literary device, Lakoff and Johnson (1980) argue that metaphor is pervasive in everyday life, structuring how we perceive and conceptualize the world around us.

Furthermore, they contend that human thought processes are largely metaphorical, making the human conceptual system metaphorically structured and defined.

Since its inception, CMT has influenced numerous academic fields and research studies. The main tenets of CMT are metaphors structure both thinking and knowledge, metaphors are essential to understanding abstract language and concepts, metaphor is grounded in physical experience, and metaphors represent different perspectives, and therefore ideologies, about the world (Deignan, 2005, p. 13). The first two tenets significantly expanded the importance of metaphor from a mere literary and poetic device to concepts that "define our everyday realities" by structuring "what we perceive, how we get around in the world, and how we relate to other people" (Lakoff & Johnson, 1980, p. 3). In addition, CMT proposes the idea of embodied cognition, or the belief that metaphorical thought arises through our interaction with the world around us. This means that abstract thought, as expressed through metaphorical language, is "the result of the way the human body constrains the way we think about abstractions such as time, emotion, morality, and politics" (Kövecses, 2005, p. 9). Finally, as metaphor represents different construals, perspectives, and ideologies, CMT has been used to study political, religious, and literary discourse to uncover deeper meanings within a speaker or writer's words.

Furthermore, in CMT, metaphorical concepts are generally viewed as unidirectional, in which a more concrete source domain is mapped onto a more abstract target domain in order to comprehend more abstract domains (Kövecses, 2010, p. 7). Since metaphorical concepts tend to be grounded in human experience, source domains are usually physical, concrete areas such as the human body, plants and animals, cooking and food, heat and cold, and light and darkness (Kövecses, 2010, pp. 18-23). In contrast, common target domains include more abstract concepts such as emotion, morality, thought, human relationships, and time (Kövecses, 2010, pp. 23-27).

According to CMT, by mapping concrete sources onto more abstract target domains, conceptual metaphors "can serve the purpose of understanding intangible, and hence difficult-to-understand, concepts" (Kövecses, 2010, p. 29).

Lakoff and Johnson (1999) later expanded on the notions of embodiment and CMT by integrating the work of four separate researchers into a theory of *primary metaphor*. A primary metaphor, the simplest, most basic foundation for metaphorical thought, pairs subjective experience and judgment with concrete sensorimotor experience (Lakoff & Johnson, 1999, p. 49). Grady, Oakley, and Coulson (1999) describe primary metaphor as "entrenched conceptual associations arising from recurring correlations in experience" (p. 112). For example, the primary metaphor INTIMACY IS CLOSENESS arises because we have the sensorimotor experience of being physically close to those with whom we are more intimate (Lima, 2006, p. 110). Another example is HAPPINESS IS BRIGHTNESS. Since brightness is connected with both warmth and increased visibility, it becomes correlated with experiences of contentment (Grady et al., 1999, p. 112). As Lakoff and Johnson (1999) explain, early conflations of subjective nonsensorimotor experiences with sensorimotor experiences in our everyday life "lead to the automatic formation of hundreds of primary metaphors," which can then be combined to form complex metaphors (p. 49). For example, the complex metaphor THEORIES ARE BUILDINGS can be formed from the primary metaphors ORGANIZATION IS PHYSICAL STRUCTURE and PERSISTING IS REMAINING ERECT (Lima, 2006, p. 110). Thus, even complex metaphors are grounded in everyday experience since they are composed of primary metaphors that are themselves grounded in human experience (Lakoff & Johnson, 1999, 63).

As a result of this focus on the experiential basis of metaphor, proponents of CMT generally concentrate more on explaining correlation metaphors, which include all primary

metaphors, than resemblance metaphors. Grady (1999) defines correlation metaphors as metaphors that involve "a correlation between distinct dimensions of experience" (p. 86). For example, the primary metaphor MORE IS UP exemplifies a straightforward correlation between two concepts: as the amount of a substance increases, the level often rises, as is the case with a liquid in a jar (Grady, 1999, p. 81). In contrast, resemblance metaphors such as "Achilles is a lion," are not motivated by experiential correlation; rather, the motivation for resemblance metaphors originates in some perceived commonality or resemblance between the two concepts (Grady, 1999, pp. 87-89). Grady (1999) is careful to use the term "resemblance" and not "similarity," as "there is often no literal similarity to point to between concepts which are associated by metaphor" (p. 89). In this example, as both lions and courageous people confront danger without fear, it can be said that we perceive something in common between stereotypical lions and brave people (Grady, 1999, p. 89). In brief, correlation metaphors arise from co-occurrence of experiences and events between the source and target domain, while resemblance metaphors arise from a perception of shared features between the vehicle and target (Grady, 1999, pp. 87-90). This means that correlation metaphors involve multiple entailments and mappings across domains, whereas resemblance metaphors involve a single perceived resemblance between two things. However, Ureña and Faber (2010) question this distinction between resemblance metaphors and what they refer to as "non-resemblance metaphors," which include correlation metaphors, since they share some common characteristics. They note, for example, that mental images, which have traditionally been associated with resemblance metaphors, are also involved in non-resemblance metaphors (ibid). Moreover, Ureña and Faber (2010) use examples from marine biology to show how groups of resemblance metaphors can be subsumed under the encompassing metaphors SEA ANIMALS ARE LAND ANIMALS and

MARINE ORGANISMS ARE WORKERS (p. 136). Futhermore, by giving examples of resemblance metaphors that are based on cause-effect relationships rather than physical similarity as well as some that follow both the polysemy generalization and the inferential generalization proposed by Lakoff (1993), Ureña and Faber (2010) show how the line between resemblance metaphors and correlation metaphors can be hard to determine with real-life data (pp. 136-140). As resemblance metaphors also include "well-established conventional metaphors that arise from enduring and productive patterns of figurative thought," Ureña and Faber (2010) argue that these types of metaphors are also worthy of serious research within the CMT framework (p. 136).

In CMT, metonymy is also considered to be a systematic part of our conceptual system, structuring the way we think and view the world around us (Lakoff & Johnson, 1980, pp. 35-40). The difference is while metaphor involves mapping characteristics from a source domain to a different target domain, metonymy involves mapping characteristics within a single domain or ICM (Kövecses, 2010, p. 175). Kövecses (2010) explains that a single conceptual domain, or ICM, is composed of smaller conceptual elements, or parts. Metonymy allows us to access the whole ICM through reference to one of its parts, one of the parts through reference to the whole ICM, or one of the parts of the ICM through reference to another part (Kövecses, 2010, p. 178). Moreover, linguistic expressions of metonymy can also be categorized into larger conceptual metonymies. For example, Lakoff and Johnson (1980) give examples of seven different conceptual metonymies: THE PART FOR THE WHOLE, PRODUCER FOR PRODUCT, OBJECT USED FOR USER, CONTROLLER FOR CONTROLLED, INSTITUTION FOR PEOPLE RESPONSIBLE, THE PLACE FOR THE INSTITUTION, and THE PLACE FOR THE EVENT (pp. 38-39). Moreover, research suggests that some conceptual metaphors may

derive from conceptual metonymies (Barnden, 2010; Deignan, 2005; Kövecses, 2010; Littlemore, 2015). For example, the conceptual metaphor ANGER IS HEAT could originate with an EFFECT FOR CAUSE metonymy (BODY HEAT FOR ANGER) (Kövecses, 2010, p. 184). In other words, due to the way metaphor is grounded in human experience, many conceptual metaphors have a metonymic base or motivation (ibid).

Despite its popularity and influence in applied linguistics, CMT has been criticized for a number of reasons. First, much of the research on metaphors has traditionally been intuitive, with researchers arriving at conceptual metaphors based on a few, hand-picked linguistic examples (Kövecses, 2011, p. 24; Picken, 2007, p. 44). However, not only have psychological experiments supported the intuitively discovered conceptual metaphors (Kövecses, 2011, p. 24), but also more metaphor research is being carried out today using larger copora rather than intuition alone (see for example Deignan, 2005). Another criticism of CMT is that the aim of identifying large, overarching conceptual metaphors ignores the highly irregular characteristics of individual linguistic metaphors (Kövecses, 2011, pp. 28-30). However, Kövecses (2011) explains that deeper analysis both reveals a great deal of patterning among linguistic metaphors and demonstrates how detailed and specific mappings can motivate subtle differences between linguistic expressions of the same conceptual metaphor (pp. 31-32). Finally, as Littlemore and Low (2006a) note, identifying conceptual metaphors can be considered "informed guesswork," for while it is very easy to create new conceptual metaphors, actually proving a particular conceptual metaphor truly exists is extremely difficult (pp. 13-14). Steen (1997) tries to address this issue by describing five steps for accurately identifying conceptual metaphors from any given linguistic expression. Steen's (1997) process involves identifying the metaphor focus, the metaphorical idea, the non-literal comparison, the non-literal analogy, and finally, the nonliteral

mapping in order to accurately code a particular conceptual metaphor; however, Steen himself acknowledges that the last two steps of his procedure are weak (p. 73). In the end, the lack of a list of clear, empirically proven conceptual metaphors along with a paucity of teaching materials developed directly around CMT (Littlemore & Low, 2006a, p. 207) means that the theory has had less influence in the second language classroom than it should have.

Examining linguistic research from a corpus background, Deignan (2005) agrees that many corpus studies generally support CMT. However, she is critical of the systematicity it puts forward, believing that linguistic metaphors are both "more dynamic and more restricted than a narrow understanding of Conceptual Metaphor Theory would suggest" (Deignan, 2005, p. 215). CMT fails to explain restrictions such as why only certain aspects of the source domain are mapped onto the target domain and how collocations and word form reduce the ambiguity of whether a word is used literally or metaphorically (Deignan, 2005, pp. 215-220). In addition, CMT does not explain the process through which metonymy leads to idiom formation or the dynamic relationship between the source and target domains (ibid). Deignan (2005) argues for a complementary theory of communication in addition to CMT as well as the inclusion of natural language data from large corpora in the study of how metaphors are formed, utilized, and interpreted (p. 222).

In brief, Conceptual Metaphor Theory (CMT) has changed the way many people view metaphor, elevating it from a mere literary device to a method for structuring our thinking. In CMT, more concrete source domains are mapped onto more abstract target domains to form metaphorical thought and language, an essential process for understanding and expressing abstract concepts and ideas. While metaphor involves mapping between two unrelated domains, metonymy involves mapping between parts within a single source domain or ICM. Nevertheless,

CMT has received criticism from researchers, particularly for its research methods and lack of empirical data. Despite its immense potential, CMT has rarely been applied directly to mainstream language teaching, perhaps due to a lack of codified conceptual metaphors as well as a lack of pre-developed teaching materials. The current study aims to bridge this gap by determining the effects of using CMT and other cognitive linguistics research to inform L2 curriculum development and language instruction in both an EFL and an ESL context.

1.2.3 Blending Theory and Novel Metaphors

Other critics of CMT have suggested that the theory fails to explain more complex examples in which both the source domain and the target domain interact to create a new image. That is, when confronted with new metaphorical expressions, listeners may come up with interpretations that include elements not found in either the source or target domain. Littlemore and Low (2006a) give the example of the proverb *Vanity is the quicksand of reason*, which often elicits images of "prison" or "doom." These emergent features are absent from both the source domain of quicksand and the target domain of vanity (p. 48).

In response to these types of examples, Fauconnier and Turner (2002) propose a process known as "conceptual blending," in which mental spaces are used to represent dynamic mappings in thought and language. "Input spaces" represent conceptual knowledge of the source and target domains, with cross-space mapping in a generic space resulting in a "conceptual blend" that can contain elements of both the source and target domains as well as new, emergent elements (ibid). Blending theory is a theory of online processing of metaphor as mental spaces are constructed in real time when we think and talk. In addition, mental spaces are connected to long-term schematic knowledge, or "frames," and lead to "conceptual integration networks," which can integrate multiple inputs and even blended spaces to create dynamic mappings in

thought and language (Fauconnier & Turner, 2002, pp. 40-47). Furthermore, conceptual integration involves partial matching between input spaces, and like in CMT, not all elements of the inputs are projected to the blend (Fauconnier & Turner, 2002, p. 47). Unlike CMT, the conceptual blend has an "emergent structure" that is not copied directly from any input, but rather is realized through composition, completion, or elaboration (Fauconnier & Turner, 2002, p. 48).

Coulson and Oakley (2003) explain how Blending Theory can be used to understand metonymy as well as metaphor. They show, for example, how idioms such as "digging your own grave," rely on complex metonymic and metaphoric mappings. As there is no actual causal relationship between digging a grave and death, understanding this idiom relies on a RESULT FOR ACTION metonymy in which one's grave stands for one's death. This example cannot be explained by simple source to target domain mapping and instead relies on a conceptual blend in which " the digger causes the grave's existence, which maps metonymically onto death, which in turns maps metaphorically onto the wrongheaded agent's failure" (Coulson & Oakley, 2003, p. 66). Similarly, understanding the phrase "blowing your own horn," involves a mental input space in which "horn" refers to the object of trumpeting, which in turn evokes the announcement of the arrival of an important person through metonymic inferencing (Coulson & Oakley, 2003, p. 67). This musician input space combines with a praising input space to create an emergent conceptual blend in which "blowing your own horn," comes to indicate praising yourself. These two examples show how Blending Theory can be applied to more complex examples that involve both metonymy and metaphor.

CMT and blending theory are not mutually exclusive; indeed, it has been suggested that the two theories complement one another since conceptual and primary metaphors can serve as

input for metaphor blends and also since mappings that originally started out as novel blends can later become entrenched conventional metaphors (Grady et al., 1999; Grady, 2005). However, compared with CMT, blending theory is more dynamic since it allows for the creation of multiple mental spaces and for more interaction between the source and target domain. As Littlemore and Low (2006a) note, blending theory highlights the fact that "some features of the source or target domain may develop a new intensity or importance when they appear in a particular metaphorical expression" (p. 48). In addition, since multiple blends can be created for the same word, blending theory is better for understanding complex metaphors, such as those found in advertising, which rely on multiple layers of meaning to create novel connections between the source and target domain (ibid), or for interpreting novel metaphors created without using more conventionalized conceptual metaphors.

While there are numerous other theories of metaphor, in applied linguistics and other fields of study, a systematic review of these theories is beyond both the scope and aim of this paper. The current research study primarily used activities based on CMT to help students understand and interpret metaphor and metonymy in reading and listening as well as produce more conventionalized metaphors in their writing and speaking, and blending theory to help students understand and create more novel metaphorical and metonymic expressions in their L2. As Littlemore and Low (2006a) note, various theories of metaphor comprehension generally require the listener to make a connection between the source and target domain in a particular context (p. 49). In the field of language learning, these theories suggest that metaphor may be problematic for learners as they "must be aware of a wide range of features of the source domain in order to identify those that are being transferred to the target domain in a particular context" (ibid). Rather than arguing about which theory is more correct, this study directly applied

previous research on teaching along with two main theories, CMT and blending theory, to the explicit instruction of metaphor to help language learners make appropriate connections between source and target domains in order to better comprehend, interpret, and use metaphor in their L2.

1.2.4 Summary of Cognitive Linguistics and Theories of Metaphor

In summary, cognitive linguistics emphasizes metaphor as a pervasive component of everyday life, structuring human thought processes, perception, and conceptualization (Lakoff & Johnson, 1980). Metaphor can be considered a device for "conceptualizing one domain of experience in terms of another" (Lee, 2005, p. 6), while metonymy is a figure of both language and thought in which one concept, word, or phrase provides mental access to another to which it is related (Kövecses, 2006, p. 99; Littlemore, 2015, p. 9). In addition, the metaphor lessons in this study also emphasized personification, or a type of ontological metaphor in which human qualities or actions are attributed to inanimate objects, as well as simile, or "direct metaphor" which uses the metaphor flags "like" or "as" to make explicit comparisons between two domains. Both conventional and novel metaphors, as well as metonymy, personification, and simile, can be challenging for L2 learners because they must learn both appropriate linguistic expressions as well as new ways of thinking about a particular topic (Kövecses, 2010, p. 34).

Although it has received criticism from researchers, Conceptual Metaphor Theory (CMT) has been influential in metaphor studies by elevating metaphor from a mere literary device to a method for structuring our thinking. Moreover, CMT can influence language teaching by highlighting how source domains are mapped onto target domains in a particular language, demonstrating how different conceptual metaphors are linguistically expressed in a particular language, and showing how metaphor structures thinking in a particular language. Blending theory, a more recent development in cognitive linguistics, can supplement CMT by showing

how the source and target domain can interact in mental spaces to create emergent elements in new and novel conceptual blends. In an effort to understand how these two theories could affect the language classroom, the current study aimed to determine the effects of using CMT and blending theory to inform teaching materials and methods to teach metaphor and metonymy in both an EFL and an ESL context.

1.3 Metaphor and L2 learners

As the main focus of the current study was teaching metaphor to L2 learners, this section will review the main skills required for L2 students to become proficient users of metaphorical language. The two main areas students need to improve are metaphor awareness and metaphoric competence. It was hoped that the metaphor lessons in this study would help students make progress in both of these areas.

1.3.1 Metaphor awareness

Metaphor awareness, or enhanced awareness of metaphor and its role in language, is important for successful L2 metaphor comprehension and use. According to Boers (2004) enhanced metaphor awareness means students can:

i) recognize metaphor as a component of everyday language use

ii) identify the source domains and conceptual metaphors that motivate many figurative expressions

iii) acknowledge the "non-arbitrary nature" of many figurative expressions

iv) recognize cross-cultural differences in conceptual metaphors

v) identify cross-linguistic variation in linguistic metaphors (p. 211)

In other words, on a more general level, students first need to be aware that metaphor is a common, non-arbitrary component of everyday language. Secondly, students should have knowledge of common source domains, as well as cross-cultural differences in both conceptual and linguistic metaphor in their L2. Boers (2000) recommends a variety of awareness-raising activities for students, including asking learners about an abstract concept in their own language to raise their awareness of the pervasiveness of metaphor, explaining metaphorical themes with reference to their experiential base, asking students to explain individual idiomatic expressions that are semantically transparent, and highlighting historical-cultural backgrounds that lead to cross-cultural differences in the students' first and second language (pp. 566-568).

It has also been suggested that knowledge of conceptual metaphor can increase the speed of learning and improve the retention of polysemantic and idiomatic expressions in a second language (Kalyuga & Kalyuga, 2008, p. 251). In addition, increased metaphor awareness can improve learner autonomy and problem-solving skills by motivating students to deduce the meanings of metaphorical expressions without the aid of the teacher (Kalyuga & Kalyuga, 2008, p. 252). Moreover, not only is metaphor awareness vital for identifying and comprehending new metaphorical expressions in the L2, it is also an important component for the development of students' metaphoric competence.

1.3.2 Metaphoric competence

Metaphoric competence, which is the ability to accurately interpret and utilize metaphors, is crucial for learners to develop in order to be considered competent in their second language (Low, 1988). Low (1988) identifies a number of skills which contribute to metaphoric competence, including the ability to construct plausible meanings, knowledge of the boundaries of conventional metaphors, awareness of acceptable topic and vehicle combinations, ability to

interpret and control hedges, awareness of 'socially sensitive' metaphors, awareness of 'multiple layering' in metaphors, and interactive awareness of metaphor.

Moreover, it has been suggested that a person's "associative fluency," or ability to make a wide range of connections, is positively correlated to their "metaphor fluency" and overall metaphoric competence (Littlemore & Low, 2006a, pp. 55-56). This ability to think of many ideas for a particular situation may help learners think of multiple source domains and multiple interpretations for a particular metaphorical expression before deciding on the correct one. That is, students who make a broader search for meaning when confronted with a metaphorical expression are more likely to think of less central metaphorical meanings of a word or phrase, which is often the key to successful metaphor comprehension (ibid). In addition, high levels of analogical reasoning and mental imagery appear to facilitate metaphoric competence in a second language. As Littlemore and Low (2006a) note, "Whereas native speakers can rely heavily on intuition, cultural knowledge, and the activation of relevant networks of features," language learners face more challenges when confronted with metaphorical expressions and may need to draw as many analogies between the source and target domain as they can to arrive at a correct interpretation (p. 56).

Thus, to be completely competent communicators, language learners must develop both their L2 metaphor awareness, or knowledge of metaphor and its role in language, and L2 metaphoric competence, or ability to comprehend, interpret, and appropriately use metaphorical expressions in the L2. Both metaphor awareness and metaphoric competence involve many different kinds of skills, and as the next section shows, students face unique challenges when confronting metaphor in their L2.

1.4 Metaphor/metonymy and L2 learners: Challenges

How similar or different conceptual and linguistic metaphors are in a students' first and second language influences the ease with which students can learn, interpret, and use L2 metaphorical expressions (Trim, 2007). While conceptual metaphor refers to the underlying concept, linguistic metaphors refer to the exact expressions and phrases used to realize the conceptual metaphor in a language. When comparing two different languages, languages may share both the conceptual and linguistic form of a metaphor, may share the same conceptual metaphor but express it differently linguistically, or may share neither the conceptual nor linguistic metaphor (Trim, 2007, p. 29). For language learners, if the first and second language do not contain the same conceptual metaphor expressed in the same linguistic form, they must learn either just the new linguistic expression or both the linguistic expression and a new form of conceptualization, which can be challenging. Indeed, Deignan, Gabrys, and Solska (1997) found that advanced Polish learners struggled more with English metaphorical expressions in which the conceptual metaphor either did not exist or was used differently in Polish. In general, it has been suggested that more culturally distant languages are likely to contain more differences in conceptual metaphors, resulting in greater variety in linguistic forms and implying that students studying a more culturally distant L2 may experience more difficulty with metaphorical language than students studying a language that is more culturally similar to their native one (Trim, 2007).

Regardless of how culturally or linguistically similar the first and second language might be, research shows that language learners tend to process conventionalized metaphors and idioms more slowly than native speakers, perhaps because they try to analyze the individual components of figurative multi-word items (Littlemore & Low, 2006a, p. 4). Indeed, eye-tracking research by Siyanova-Chanturia, Conklin, and Schmitt (2011) shows that while native speakers process both

figuratively and literally used idioms faster than novel phrases, non-native speakers process both idioms and novel phrases at the same rate. In addition, L2 speakers process figuratively used idioms more slowly than literally used ones, despite the fact that an idiom's figurative meaning almost always occurs much more frequently than its literal one (Siyanova-Chanturia et al., 2011, p. 267). Siyanova-Chanturia et al. (2011) hypothesize that native speakers are able to effectively use the preceding context to help process idiomatic expressions while non-native speakers are not (ibid). This adds an additional challenge for the L2 learners confronting new idiomatic expressions in this study.

In addition to difficulties resulting from conceptual and linguistic differences between the first and second language as well as the overall slower processing speed, research suggests that metaphorical language can pose significant challenges for second language learners linguistically, culturally, and cognitively (Charteris-Black, 2004; Kövecses, 2005; Littlemore, 2003; Low, 1988; Low & Littlemore, 2006; Trim, 2007). The following section will discuss each of these challenges in more detail as background for the current study, which focuses on teaching learners how to overcome these obstacles.

1.4.1 Linguistic challenges

To begin with, metaphor can be a challenge for students purely from a linguistic perspective. Learners must first decide whether a term or phrase is being used literally or metaphorically, which is not always easy to do in their second language (Low, 1998, p. 136). In addition, the complete meaning of a metaphorical expression may not be transparent from the context, making it even more difficult for learners to process (Littlemore & Low, 2006a, p. 5). Moreover, learners may encounter the figurative meaning of a word before learning the literal meaning, and learners who are unfamiliar with the more basic meanings of words in a

metaphorical expression will certainly struggle to interpret its metaphorical meaning (Low, 1988, p. 136). Finally, compared with native speakers, learners often lack a repertoire of familiar, prefabricated figurative expressions and this lack of language knowledge contributes to the difficulties they have interpreting metaphorical language in their L2 (Littlemore & Low 2006a, p. 6).

At the same time, Trim (2007) acknowledges that due to the embodied nature of many conceptual metaphors, a great deal of universality exists in conceptualizations from a variety of languages, especially those related to the body and spatial orientation (pp. 30-33). This is because people around the world experience the same reactions to certain events as they experience the world in their daily life. For example, anger is often expressed through metaphors related to heat since increased pulse rate and raised skin temperature correlate with being angry. The conceptual metaphor ANGER IS HOT FLUID/GAS IN A CONTAINER can be found in English, Japanese, and Chinese (Trim, 2007, p. 32). In this case, L2 English learners from China and Japan should be able to understand the underlying conceptual metaphor and would only need to learn the English vocabulary and linguistic expressions for articulating it.

However, even when languages share the same metaphorical concepts, there is still a large amount of cross-cultural variation in the ways metaphorical thought is both conceptualized and linguistically expressed (Kövecses, 2005). For instance, the range of the target domain and the scope of the source domain can lead to a great amount of variety in the way conceptual metaphors are realized linguistically in different languages (Kövecses, 2005, pp. 70-79). In addition, as there are a number of different source domains that can be mapped onto a particular target domain, two languages or cultures may also show a preference for one conceptual metaphor over another even when the languages share underlying conceptual metaphors

(Kövecses, 2005, pp. 82-86). For example, when both Americans and Hungarians were asked to write about life, the top ten most commonly used metaphors for both groups included four of the same source domains, as shown in Table 1 below. However, speakers of the two different languages showed different preferences for the source domains, and used some more frequently in one language than in the other (Kövecses, 2005, pp. 83-85). In addition, cross-cultural variation can arise through different construals of the same conceptual metaphor through different mappings, entailments, and blending (Kövecses 2005, p. 118), or through variation in linguistic expression caused by differing degrees of linguistic elaboration, different kinds of linguistic expression, degrees of conventualization, degrees of specificity, scope of metaphor, and degrees of metaphorical transparency (Kövecses, 2005, pp. 151-155). This means that regardless of whether or not two languages share the same conceptual metaphor, comprehending and using the specific linguistic expression of that concept in the second language may still be difficult for L2 students.

Table 1: Life Metaphors for Americans and Hungarians (cited in Kövecses, 2005, p.84)

American	Hungarian
1. LIFE IS A PRECIOUS POSSESSION	LIFE IS A STRUGGLE/WAR
2. LIFE IS A GAME	LIFE IS A COMPROMISE
3. LIFE IS A JOURNEY	LIFE IS A JOURNEY
4. LIFE IS A CONTAINER	LIFE IS A GIFT
5. LIFE IS A GAMBLE	LIFE IS A POSSIBILITY
6. LIFE IS A COMPROMISE	LIFE IS A PUZZLE
7. LIFE IS AN EXPERIMENT	LIFE IS A LABYRINTH
8. LIFE IS A TEST	LIFE IS A GAME
9. LIFE IS WAR	LIFE IS FREEDOM
10. LIFE IS PLAY	LIFE IS A CHALLENGE

Source: Kövecses, 2002

Indeed, Falck (2012) observed that cross-linguistic transfer occurs even when two languages share the exact same underlying primary and conceptual metaphors. Falck (2012) found that, compared to native English speakers, Swedish students of English metaphorically used "way" more often than "road" and "path" and also focused more on manner than motion when speaking English (p. 130). As one's native language influences how metaphors are learned and used in the L2, even advanced learners conceive and talk about concepts differently in the L2 than native speakers (Falck, 2012, p. 131).

Moreover, linguistic factors affect not only metaphor, but also metonymy. For example, while body parts are used metonymically in many different languages, there is extensive variation in the way they are metonymically chained (Littlemore, 2015, p. 140). For instance, while 'ear' often refers to hearing, in some languages the 'ear' metonymy is also chained to refer to paying attention or being obedient (ibid). Moreover, metonymic uses in one language may have a broader, more inclusive meaning than in another, possibly leading to misunderstandings in cross-linguistic communication (Littlemore, 2015, p. 142). Other research has found cross-linguistic variation in the syntax of metonymical expressions (Littlemore, 2015, p. 141). This means that L2 students may inadvertently transfer the syntax from their L1 when using metonymy in their L2. Littlemore (2015) concludes that subtle yet consequential differences in metonymy across languages may "present a challenge to language learners and may explain some of the 'foreign-sounding' expressions" that learners occasionally produce (p. 143).

These studies show that linguistic factors contribute to difficulties L2 students face when interpreting metaphor and metonymy in their second language. Learners may struggle with determining whether or not a term or phrase is literal or metaphorical, may not know the basic meanings of words, and might lack a repertoire of familiar metaphorical expressions in their L2.

Furthermore, variation in the preferences for different conceptual metaphors and differences in the way similar conceptual metaphors are linguistically expressed in various languages can exacerbate this problem. In addition, these linguistic challenges extend not only to metaphor but also to metonymy as cross-linguistic variation in the way metonymy is expressed, the extent to which specific metonymic expressions are used, and its accompanying syntax can all pose challenges for L2 learners (Littlemore, 2015). As this study involved students speaking a number of different first languages, linguistic challenges could make it more difficult for them to correctly understand, interpret, and use both metaphor and metonymy in their L2.

1.4.2 Cross-cultural challenges

Next, metaphor is problematic for L2 learners for cultural and pragmatic reasons. At the most basic level, students may incorrectly transfer metaphorical expressions from their first language to their second language (Low, 1988, p. 136). Beyond that, since metaphor is concerned with expressing both our points of view and how we feel about them, metaphorical language often reveals an underlying system of values and evaluation, adding an additional layer of complexity for L2 students (Charteris-Black, 2004, p. 11). In fact, research shows that students from different cultural backgrounds may incorrectly interpret metaphorical expressions in their second language, especially if the metaphors represent different cultural values than their own (Littlemore, 2001c; Littlemore, 2003). This issue also extends to metonymy, as learners may believe that a particular metonymy serves a simple referential function without understanding its pragmatic connotations (Littlemore, 2015, p. 144).

Cross-cultural variation in source domains and conceptual metaphors can pose a significant challenge for L2 learners. As Trim (2007) notes, “Since experience does not determine a conceptual system but only motivates it, the same experiences may provide equally

good motivation for two different systems" (p. 54). Trim (2007) gives extensive analysis of color metaphors in different languages, with various colors representing very different concepts in different languages (pp. 56-62). These expressions may be more difficult for L2 learners as they represent very different ways of conceptualizing colors than their first language. Moreover, as Boers, Demecheleer, and Eyckmans (2004) note, metaphorical expressions that are derived from a source domain that is less salient in the learner's own culture may be particularly challenging for L2 learners. For example, English contains more idioms derived from card games and gambling than Dutch. This means a Dutch learner of English may have more difficulty interpreting and using these English expressions (Boers et al., 2004, p. 377). Likewise, expressions derived from popular sports, such as baseball in America and cricket in England, may be especially opaque for learners who have never experienced these particular games (ibid). Indeed, Boers et al. (2004) found that students had more difficulty comprehending and recalling idioms that were motivated by culturally less salient source domains even after receiving an explanation for each phrase. Similarly, Littlemore and Low (2006a) give the example of a beer advertisement with the slogan "Boddingtons is the Cream of Manchester." As cream and creamy beers are not popular in Japan, a group of four advanced Japanese learners of English presented with the advertisement misinterpreted the slogan with a negative stance, guessing that the beer might be "artificial," "sugary" and "short-lived" (p. 52). Thus, a gap in their cultural source domain knowledge prevented the L2 students from correctly interpreting the metaphor.

Trim (2012) observes that ease of cross-cultural comprehension of metaphor depends on various factors between the L1 and L2. After examining drug-related metaphors in English, French, German, and Italian, Trim (2012) found that shared features across languages, such as similar analogies, cultural overlap in linguistic metaphor, and universal components make cross-

linguistic metaphor interpretation easier (pp. 227-232). On the other hand, variation with respect to the linguistic realizations of conceptual metaphors and the way they are linked or extended pose a challenge for cross-language metaphor interpretation and understanding (Trim, 2012, pp. 232-234). In general, Trim's (2012) research suggests that if more conceptual networks are shared among cultures or known to L2 speakers there will be more substantial levels of cross-language understanding, while when fewer conceptual networks are shared among cultures or known to L2 speakers, there will be less significant levels of cross-cultural understanding (p. 235).

Along the same lines, Charteris-Black (2002) used contrastive analysis of figurative language to predict the types of problems that Malay-speaking learners of English may face when learning both metaphor and metonymy in their L2. After identifying six possible relationships between metaphorical and metonymic expressions in different languages (see table 2 below), Charteris-Black (2002) found that type one expressions, or those with an equivalent linguistic form and conceptual basis in both the L1 and L2, were easiest for learners to acquire, while type three expressions, or those with the same linguistic form but a different conceptual basis, as well as culture-specific expressions such as type five and type six with different linguistic forms and conceptual bases, were the most challenging for L2 learners. He recommends teachers focus on linguistic differences when two languages share the same conceptual basis but focus on cultural differences when conceptual metaphors or metonyms differ. Charteris-Black (2002) also believes learners must be made aware of the connotations of various figurative expressions in their L2 as even conceptually and linguistically equivalent metaphorical or metonymic phrases can have different connotations in two languages for cultural reasons (p. 111).

Table 2: Summary of Contrastive Model for Figurative Units (Charteris-Black, 2002, pp. 114 - 119)

Category	Linguistic Form	Conceptual Basis	Example From Test Items
Type 1	=	=	***A broken heart*** *Malay and English have the same linguistic form and conceptual basis, but Malay uses *hati* (liver) instead of heart
Type 2	~	=	***Big-mouthed*** *Linguistic form is similar with related, but not equivalent meanings; the phrase in Malay is "mouth a big jar used for storing water," but the English phrase implies boastfulness while the Malay phrase means revealing more in one's speaking than is appropriate
Type 3	=	#	***They got the wind up*** *English conceptual metaphor is FEAR IS WIND, while Malay conceptual metaphor is ANGER IS WIND
Type 4	#	=	***A windbag*** *No literal translation available in Malay, but both languages share the conceptual metaphor VALUE IS SUBSTANCE
Type 5	#	**# + Transparent**	***Turn your back on*** *While there is no equivalent linguistic expression or conceptual metaphor in Malay, the idea of "rejection" is relatively transparent.
Type 6	#	**# + Opaque**	***Wrung her hands*** *Not only does Malay lack an equivalent linguistic expression or conceptual metaphor, but also the meaning of being "worried" is relatively opaque.

= equivalent; # different; ~ similar

With respect to metonymy, cross-cultural variation not only affects how learners interpret and use metonymy in their second language, but may also lead to miscommunication. For example, Rost-Roth (2006) reports that during office hours with a German lecturer, a student tried to express dissatisfaction with his academic program by describing negative emotions. Although the student was making use of an EMOTION FOR CAUSE OF EMOTION metonymy to express his dissatisfaction, the lecturer did not understand, leading to a lack of communication (cited in Littlemore, 2015, pp. 146-147). Other issues can arise if students do not understand the pragmatic functions of L2 metonymies. For example, Littlemore (2015) explains that when PART FOR WHOLE metonymies or DEFINING PROPERTY OF A CATEGORY FOR THE

WHOLE CATEGORY metonymies are applied to human subjects, it can have a strong depersonalizing effect, causing these types of metonymies to be prevalent in sexist discourse and other forms of prejudice (pp. 25-26). Littlemore (2015) gives examples from the Bank of English (BoE) of a woman saying "I just couldn't bear the way the men regarded me as just a *pair of legs"* or a man being called a "*ginge*" (ibid*)*. Language learners who do not understand the connotations of metonymic expressions such as these could easily offend someone.

In brief, cultural issues make metaphor and metonymy challenging for students. In general, the more different two languages are culturally and linguistically, the more challenging the metaphorical and metonymic language will be (Charteris-Black, 2002; Trim, 2007; Trim, 2012). Moreover, L2 learners may incorrectly transfer metaphorical expressions from their L1 (Low, 1998, p. 136) or may struggle simply because they lack cultural knowledge of the source domain or conceptual metaphors and metonyms (Boers et al., 2004; Littlemore & Low, 2006a; Trim, 2007). Since this study involved students from a number of different cultural backgrounds, it was predicted that cross-cultural variation could affect how the participants interpreted and used metaphor and metonymy in their L2.

1.4.3 Cognitive factors

Finally, research suggests that cognitive factors also affect students' abilities to learn, interpret, and use metaphor, which can make teaching metaphor even more complex and challenging for instructors. First, research on cognitive style and metaphoric competence links holistic and imager style with improved metaphoric competence (Littlemore, 2001b). Indeed, a study by Johnson and Rosano (1993) found that ESL students' field independence, or a tendency to separate information and details from the surrounding context, was negatively correlated with both metaphor fluency and overall communicative proficiency. Littlemore and Low (2006a) also

suggest that tolerance of ambiguity, or a positive response to ambiguous situations and stimuli, as well as level of intuition, may also play a role in individual differences in metaphoric competence (p. 83). Another study by Chen, Lin, and Lin (2014) found that more field-dependent students benefitted more from instruction adopting conceptual metaphors, while more field-independent students benefited more from instruction involving metaphor mappings. These studies show that metaphoric competence is related not only to language proficiency and linguistic competence, but also to "a wide range of cognitive factors," leading to significant variation in individual students' abilities to comprehend, interpret, and produce metaphor (Littlemore & Low, 2006a, p. 80).

In addition, as mentioned in section 1.3.2 above, metaphoric competence is linked to "associative fluency," analogical reasoning skills, and ability for mental imagery (Littlemore & Low, 2006a, pp. 55-56). That is, being able to make a wide range of connections, think about similarities between the source and target domains, and create mental pictures are all cognitive abilities that can increase learners' chances of success when confronted with metaphorical expressions in their L2. On the other hand, students who struggle with these skills may find comprehending and interpreting metaphor more challenging. Indeed, Littlemore and Low (2006a) conclude that due to individual student variation, "despite the teacher's best efforts to help their students develop the ability to deal with metaphor, there will always be some who respond well to the approach and others who 'just don't get it'" (p. 80).

To sum up, research shows that a range of cognitive factors, such as cognitive style, tolerance of ambiguity, and level of intuition, can lead to substantial variation in students' L2 metaphoric competence (Littlemore & Low, 2006, pp. 80-83). Certain cognitive abilities, such as associative fluency, analogical reasoning skills, and mental imagery, can enhance students'

metaphoric competence, while weakness in these areas may detract from students' abilities (Littlemore & Low, 2006a, pp. 55-56). Thus, cognitive factors, in addition to linguistic and cross-cultural issues, play a significant role in L2 students' metaphor and metonymy comprehension. Previous research into teaching methods for helping students overcome these challenges will be discussed in the next section as background to the teaching methods and materials used in the current study.

1.5 Teaching metaphor/metonymy

As metaphor is an important part of everyday communication and poses significant linguistic, cultural, and cognitive challenges for L2 students, language classes that aim for communicative competence should include a focus on metaphor use. Indeed, Littlemore and Low (2006a, 2006b) show how figurative thinking is a critical component of each section of Bachman's (1990) model of language competence. That is, metaphoric competence contributes to students' grammatical competence, textual competence, illocutionary competence, sociolinguistic competence, and ultimately, overall communicative language ability *(*ibid). Therefore, teachers who are concerned with improving their students' abilities to communicate effectively in the L2 should also be concerned with developing students' metaphor awareness and metaphoric competence.

This section will begin by introducing previous research on the prevalence of metaphor and metonymy in academic settings and the challenges they pose for L2 learners in both an EFL and an ESL context. Next, a general discussion of "best practices" for teaching metaphor will be introduced before moving on to specific research on metaphor in the four skill areas of reading, writing, listening, and speaking. As such, this section will provide a foundation for the current study, which aims to expand on previous research into teaching metaphor for L2 learners.

1.5.1 Why teach metaphor/metonymy in academic settings?

First, studies have shown not only that metaphor is prevalent in a variety of academic contexts, but also that it presents special challenges for L2 learners. Examining three university lectures, Low, Littlemore, and Koester (2008) found that metaphorically-used lexical items accounted for 10-13% of the total lecture. However, they also observed a large number of non-recurrent, "one-off" metaphors and idioms used throughout the lecture. These metaphors, along with cultural references from the lectures, were not elaborated, developed, or explained, potentially causing problems for non-native listeners (Low et al., 2008, p. 450). Likewise, although they originally speculated that idioms might occur much less frequently in academic speech than in general conversation or in certain disciplines compared with others, Simpson and Mendis (2003) found that idioms actually occur with some frequency in a variety of academic settings and disciplines (pp. 426-427). However, like Low et al. (2008), Simpson and Mendis (2003) also found that more than half the idioms occurred only once, suggesting that learners need to learn an extensive number of idioms to converse fluently in their second language (p. 425). These two studies demonstrate the importance for students who take classes in a second language to comprehend and interpret metaphor, figurative language, and idioms due to their prevalence in academic settings and also why these expressions may potentially cause difficulty for L2 students.

Secondly, as we saw above, metaphorical language can be particularly difficult for students to understand and interpret. Students can use a number of techniques when confronting difficult metaphors, including referencing an equivalent metaphor in their L1, using the literal meaning of the words to guess the figurative meaning, and guessing the meaning from context; however, all these techniques can still result in misunderstanding and misinterpretation

(Littlemore, 2001c, p. 335). For example, examining words and expressions from university lecturers that were perceived as problematic by international students, Littlemore (2001c) noted that over 80% of the difficult language students encountered in lectures was metaphorical (p. 337). Furthermore, even when students understood the individual words, they still experienced difficulties in comprehending the overall meaning of metaphorical expressions (ibid). Indeed, a later study by Littlemore (2003) found that students often misinterpreted evaluative metaphors used by university lecturers if they conflicted with their own value systems and cultural background. That is, even when students understand the more "factual content" of a metaphorical expression, they are less likely to correctly interpret their lecturer's evaluative stance toward a topic if it does not reflect their own value system (ibid). A similar study by Littlemore, Chen, Koester, and Barnden (2011) found that metaphor accounted for around 20% – 60% of the words in four different university lectures that international students studying at a British university found difficult to understand (p. 417). In addition, they found not only that 41% of lexically familiar items that were problematic for the students contained metaphor, but also that almost half of the students' explanations of the metaphors from the lectures were at least partially inaccurate (Littlemore et al., 2011).

Similarly, metonymy comprehension can also be challenging for L2 learners. In addition to cross-linguistic and cross-cultural issues, metonymic motivations can be unpredictable, and just like with metaphor, the same metonymically used word can have different meanings in different contexts (Littlemore, 2015, p. 149). Littlemore (2015) gives the example of "weather," which can mean both 'appearing to be affected by the weather,' as in "Those rich leather uppers have a warm *weathered* look," and the exact opposite, as in "Major changes have been *weathered* and a new balance has been achieved" (p. 148). While L2 students have been found to

employ a number of strategies when confronted with metonymy, such as activating a metonymy type, noticing the active zone/profile discrepancy, and using contextual clues, students can still misinterpret these expressions (Littlemore, 2015, p. 149). Indeed, research by Littlemore, Arizono, and May showed that when confronted with metonymy in their L2, students commonly misinterpreted the expressions due to "over-specification," "under-specification," focusing on the wrong part of the ICM, misinterpreting contextual clues or syntax, or interpreting metonymy as if it were metaphor (cited in Littlemore, 2015, p. 149). As metonymy tends to be ignored in the language classroom (Littlemore, 2015, p. 148) and misunderstandings of metonymy can occur in academic contexts among researchers from different disciplines (Littlemore, 2015, p. 7), learning how to understand and use metonymy in academic contexts would be beneficial for language learners.

In summary, combined with the research above on the pervasiveness of metaphor in language and its significant role in cognition and communication (Lakoff & Johnson, 1980), the considerable linguistic, cultural, and cognitive challenges it presents for language learners, and its prevalence in academic lectures, teaching students how to interpret and use metaphorical and metonymic language must be a priority for the L2 classroom. Littlemore (2003) acknowledges that interpreting lecturers' metaphors is extremely challenging for students, as they must reflect on their own value system as well as that of their lecturer while attending to details to make sure they have fully understood the lecturers' views; however, metaphoric competence is an essential component of communicative competence (Littlemore & Low, 2006a, 2006b). Therefore, students need to learn how to deal with metaphor in their L2. In addition, as metonymy poses similar challenges and can result in similar misunderstandings for L2 learners, incorporating

direct metonymy instruction into the language classroom might also be beneficial for learners studying in an academic context.

1.5.2 Teaching and learning metaphor/metonymy in an EFL vs. an ESL context

This study analyzed the effects of explicit metaphor instruction on students in both an EFL context and an ESL context. It was hypothesized that how quickly and how well students learn to understand, interpret, and use metaphorical and metonymic language in their L2 might be affected by whether they are learning it as a foreign language or as a second language. Accurate metaphor and metonymy interpretation requires adequate cultural knowledge, making expressions motivated by culturally less salient source domains more difficult for L2 learners to comprehend and recall (Boers et al., 2004). ESL students who are immersed in the target language community gain cultural knowledge through their everyday interactions and may find it easier to understand metaphorical expressions, such as idioms related to baseball in the U.S. or cricket in the U.K. In addition, Japanese students studying in England who have actually tried creamy beer may be able to interpret the slogan "Boddingtons is the Cream of Manchester," better than Japanese EFL students who have only been exposed to Japanese beer (Littlemore & Low, 2006a). In other words, these examples show how ESL students living overseas might be more likely to acquire both "cognitive models" or knowledge bases of fields like the local sports, food, and drink, as well as "cultural models" of cultural information shared by native speakers of the language (Ungerer & Schmid, 2006, pp. 49-52). Thus, when it comes to metaphor, ESL students may have an advantage over EFL students since exposure to the local culture can increase their cultural knowledge of common source domains in their L2.

Moreover, ESL students are likely to experience more contact with naturally occurring metaphorical and metonymic language through daily interactions with the target language

community, while EFL students must rely more heavily on input from their English language textbooks and teachers. As discussed in section 1.5.1 above, metaphorically used lexical items and idioms occur with some frequency in academic lectures, meaning that ESL students studying overseas will naturally be exposed to these expressions in their university life (Littlemore et al., 2011; Low et al., 2008; Simpson & Mendis, 2003). In contrast, EFL students who study other courses in their first language will only receive input on metaphor through their English classes and textbooks. Although recent textbooks series have tried to incorporate metaphorical language in upper level textbooks, as Littlemore and Low (2006a) note, there is "practically no coverage of metaphorical language" in lower level English language textbooks (p. 209). Similarly, examining English language textbooks used in Spanish secondary and post-secondary education, Alejo González, Piquer Píriz, and Reveriego Sierra (2010) found that both a lack of sufficient frequency and scarcity of explicit practice of phrasal verbs would make it difficult for students to master the use of phrasal verbs through exposure to the textbook alone. Moreover, since the textbooks fail to follow a cognitive linguistics approach by highlighting the motivation behind phrasal verb collocations, they conjecture that textbook materials alone would fail to foster retention in students (ibid). In addition, while learner dictionaries like the *MacMillan English Dictionary for Advanced Learners* include examples for specific conceptual metaphors, these are only included for "specially enhanced" entries (Littlemore & Low, 2006a, pp. 209-210). This means that compared with ESL students, EFL students who do not have daily contact with the target language community may lack exposure to authentic metaphorical and metonymic language in their L2.

On the other hand, one advantage of teaching metaphor and metonymy in an EFL context is that the classes are generally monolingual, especially in this study, where the EFL students all

shared Spanish as their first language. In an EFL class where all students share similar cultural and linguistic backgrounds, learners are likely to experience similar problems, such as lack of source domain knowledge or L1 transfer when faced with new L2 metaphorical expressions; therefore, lesson plans can address these issues for the entire class. However, in an ESL context, students come from a variety of cultural and linguistic backgrounds, meaning that each learner may struggle with different expressions or exhibit L1 transfer on different items. This makes it much more difficult for the teacher to foresee learner errors and organize lessons around specific metaphorical expressions or cultural differences.

To sum up, compared with students studying in an EFL context, those studying in an ESL context may benefit from increased cultural knowledge and exposure to metaphorical and metonymic language input through daily interaction with the target language community. In contrast, EFL students may be limited by their cultural knowledge and insufficient input coming solely from their English language textbook. However, one benefit of teaching metaphor and metonymy to EFL students is that their shared linguistic and cultural background may make it easier for teachers to predict learner difficulties or determine the best teaching materials when preparing lesson plans. As a result, one strength of this study is that by using the same teaching methods in multiple contexts, it is possible to determine how the lessons might be received differently in an EFL and an ESL context.

1.5.3 Recommended "best practices" for teaching metaphor

While there is no one method for teaching metaphor to L2 learners, most researchers focus on explicit instruction that requires students to actively interact with the language in order to understand and interpret new metaphorical expressions (Littlemore & Low, 2006a; Low, 1988). In addition, teachers might consider focusing on building students' autonomy and

supplementing textbook resources to sufficiently address metaphor in the L2 classroom (Littlemore & Low, 2006a). This section will begin with a basic overview of best practices for teaching metaphor in general before moving on to examine research on teaching metaphor in each of the four skill areas.

First, Low (1988) strongly argues for incorporating metaphor instruction into the second language curriculum since metaphor is central to the use of language as well as to its structural system, as shown in the sections above. However, rather than learning metaphorical expressions one-by-one as they appear in texts or through lists of phrases, he suggests teaching both creative and conventionalized metaphor in a more controlled manner. For creative metaphors, Low (1988) suggests encouraging students to build on underlying conceptual metaphors to create metaphors that are both innovative and appropriate in the second language (p. 138). For conventionalized metaphor, he suggests multi-text activities that require students to use metaphor in a variety of situations and contexts (Low, 1988, pp. 139-141). Low (1988) also recommends analytic discussions to identify underlying conceptual metaphors, the extent to which metaphors are used and extended, and the limits of metaphorical expressions, as well as to compare with metaphorical structures in the students' L1 (p. 141). Likewise, Deignan, Gabrys, and Solska (1997) advocate metaphor awareness-raising activities such as translation exercises, discussion, and comparison of metaphorical expressions in the L1 and L2 to help students both understand and appropriately use metaphors in their L2.

Littlemore and Low (2006a) note that metaphor processing by language learners may be more conscious and less automatic than metaphor processing by native speakers (p. 52). To improve their metaphor comprehension skills, learners must improve their ability to notice metaphorical language, activate their source domain knowledge, make a wide range of

connections to identify a wide range of possible interpretations for a particular metaphor, reason analytically to determine which aspects of the source domain are being accessed to describe the target domain, and finally form mental images to help them interpret the metaphorical language (Littlemore & Low, 2006a, pp. 52-58). Research shows that learning metaphorical language is aided by input about basic word meanings and underlying conceptual metaphors along with active interaction on the part of the learners through classroom activities (Littlemore & Low, 2006a, p. 37) as well as consciousness-raising activities designed to focus learners' attention on metaphorical expressions in the target language (Littlemore & Low, 2006a, p. 197). As a result, Littlemore and Low (2006a) recommend teachers use "querying routines" in which learners are encouraged to ask direct questions about basic meanings and senses of words so they can learn to cope with metaphor they encounter in new texts (p. 25). Moreover, these "querying routines" can aid retention by leading to "deeper processing," as students must actively engage with the text, question it, and make connections to other topics (ibid). Littlemore and Low (2006a) suggest that teachers guide extended query sessions by helping students first identify basic senses of words, then asking about shape, components, structures, and functions of the words, and finally using the context along with peripheral details, associations, and concepts to determine the appropriate meaning of metaphorical language (ibid). This process can not only help students learn to "think figuratively" in their second language but can also raise their overall metaphor awareness.

In addition, it is important to develop learner autonomy in figurative thinking so learners will be able to confront metaphorical language outside of the language classroom. For learners to be able to comprehend metaphor on their own, they need to be able to distinguish figurative expressions from literal ones, understand the cognitive processes involved in interpreting figurative language, and predict some of the possible misinterpretations they might make

(Littlemore & Low, 2006a, p. 69). For students to be able to produce metaphor on their own, they need to recognize when they can use it, be aware of possible problems in wording and register, and appropriately signal their use of novel metaphorical expressions (ibid). Both students' metaphoric competence and autonomy can be increased over time by training students to think metaphorically through querying procedures and class activities (Littlemore & Low, 2006a, pp. 69 – 70). For this reason, Littlemore and Low (2006a) advocate a teaching approach that combines *language play*, which encourages students to experiment with the figurative potential of words and phrases, with task-based learning, which provides learners with focused language-learning tasks, specific goals, and language focus activities (p. 198). At the same time, learner's autonomy, and therefore metaphoric competence, may be limited by a lack of knowledge of word meanings and target language culture as well as characteristics of specific figurative expressions, such as degree of transparency, word class, degree of conventionalization, and use of technical language (Littlemore & Low, 2006a, pp. 71-78). That is, even if students develop a high degree of autonomy, figurative thinking, and metaphoric competence, some expressions are just more difficult to comprehend than others.

In addition to metaphor instruction, Barcelona (2010) recommends explicit focus on metonymy in the language classroom. Specifically, he suggests raising learners awareness of metonymy through examples, discussing with learners how to use contextual clues to understand metonymy, explaining language or cultural barriers, stimulating metonymy-guided reasoning, and exploiting the metonymic motivations of metaphors (p. 147-148). Likewise, Littlemore (2009) suggests teaching metonymy in indirect speech acts by having students first notice the use of metonymy in indirect speech acts and then identify the correct implicature (p. 121-122). In addition, she proposes that having students discuss the metonymic basis of English loan words

could help raise their metonymy awareness (Littlemore, 2009, p. 123-124). Another study by MacArthur and Littlemore (2008) suggests that having students use corpora in a data-driven approach might help learners understand multiple meanings of everyday lexical items and appreciate the figurative continuum of language in use, including metonymy. However, they also caution that multiple variables, such as learner characteristics, L1 transfer, and the concordance lines themselves, can affect learner performance and that this method is largely untested (ibid). As with the suggestions for metaphor instruction, these recommendations focus first on raising students' metonymy awareness, or knowledge of metonymy and its role in language, and then helping students learn to understand the metonymy they encounter in their L2.

Finally, one challenge for incorporating metaphor instruction into the language classroom is the way it is generally treated in language textbooks. Littlemore and Low (2006a) identify three broad approaches to metaphor in language teaching materials: present metaphorical language as something special, structure lessons around specific conceptual metaphors, or attempt to integrate metaphor into the textbook (p. 205). However, each of these techniques raises issues for authentic language instruction. First, Littlemore and Low (2006a) found that books that present metaphor as something special, such as books of idioms or phrases, perpetuate the myth that idioms are not a part of intrinsic, everyday language use. In addition, they found that these books tended to rely heavily on decontextualized, multiple choice activities to "test" rather than "teach" new phrases (p. 205). While the second approach of organizing lessons around conceptual metaphors has more promise, Littlemore and Low (2006a) found these materials relied heavily on artificial, unnatural language and failed to give enough consideration to the phraseological aspect of linguistic metaphors or the persuasive functions of metaphors in general (p. 207). Finally, although they support incorporating metaphor into more general

textbooks, Littlemore and Low (2006a) criticize these textbooks for separating metaphorical language activities into disconnected sections at the end of each chapter and also for only incorporating metaphorical language activities into the upper levels of the textbook series while secluding them from lower and intermediate level textbooks (p. 209).

In general, a teaching approach that encourages active interaction with metaphorical language, the development of metaphor awareness and metaphorical competence through activities designed to increase learner autonomy, and an emphasis on language play is likely to improve students' abilities to comprehend and use metaphor in their second language (Littlemore & Low, 2006a; Low, 1988). Furthermore, activities that raise students' metonymy awareness and allow them to try to interpret metonymy in their L2 can also be beneficial. In addition, teachers may need to supplement textbook materials as they are likely to find textbook materials addressing metaphorical language to be insufficient for their students' needs, both in terms of teaching approach and the amount of material covered (Littlemore & Low, 2006a*)*. While this section provided general tips and guidelines for teaching metaphor, the next sections will specifically address each of the four skill areas.

1.5.4 Teaching metaphor for reading

Research into teaching L2 students to identify and comprehend metaphors in reading passages has focused on helping students first identify metaphorical language, analyze its components, and finally interpret its evaluative meaning. As Low (1988) notes, the first challenge of understanding metaphorical language is deciding whether something is being used literally or figuratively in the first place. Indeed, metaphor "visibility" can affect students' abilities to understand and interpret metaphor in reading passages. At one end of the spectrum, relatively invisible metaphors may provide only subtle hints of potential figurative meanings for

the reader, while at the other extreme figurative language may "take over to such a degree that it blocks the comprehension process altogether," as shown in the chart below (Picken, 2007, p. 72). Metaphor visibility depends on whether or not the source and target domain are explicitly stated, how strongly they are linked, and whether there are lexical cues to indicate the presence of a metaphor (Picken, 2007, p. 73). L2 students may have difficulty when confronted with invisible metaphors in particular, as they may try to interpret these phrases in a literal way (Picken, 2007, p. 74). Indeed, a study by Picken (2007) supports the idea that metaphor visibility affects L2 students' metaphor comprehension. After creating both a high-visibility and a low-visibility ending for a story, Picken asked students to read one of the versions and write an explanation of the story's ending. Students who received the low-visibility version of the story were much more likely to write a literal interpretation, even though a literal interpretation of the woman "drowning" in the story was impossible. This trend held true even when the experiment was repeated with more advanced students, suggesting that metaphor visibility can have a significant impact on whether or not students can first identify and then correctly interpret metaphorical expressions in reading passages (Picken, 2007, pp. 74–77).

Table 3: Metaphor Visibility: From Invisible to Blindingly Visible (Picken, 2007, p. 73)

1. Only one term is visible.	Example: I can see the sun.
2. Both terms are visible, but the link is not very close.	Example: I can see my love.
3. Both terms are visible and closely linked.	Example: Juliet is the sun.
4. Both terms are visible and closely linked, and a lexical cue is given.	Example: Juliet is, metaphorically speaking, the sun.

Other researchers have focused on teaching metaphor explicitly for L2 reading comprehension. For example, Lai and Shen (2013) found that teaching American cultural metaphors to a group of EFL Chinese students not only improved students' reading

comprehension, but also made learning English more interesting and motivating. Furthermore, Picken's (2005) research suggests that metaphor awareness-raising activities can improve both the short-term and long-term metaphor comprehension and interpretation of EFL students. First, he found that a majority of his Japanese EFL students metaphorically interpreted a poem with either an extensive metaphor raising activity or just by being prompted that the poem included the conceptual metaphor LIFE IS A JOURNEY. However, only one out of ten students was able to read the poem metaphorically without any prompting. In addition, Picken (2005) found that extensive metaphor raising activities using conceptual metaphors enabled students to interpret another piece of literature metaphorically three months later without any prompting, suggesting that conceptual metaphor awareness-raising can trigger metaphorical readings even when students are not already expecting a conceptual metaphor. This shows that teaching students about metaphor interpretation using conceptual metaphors can help L2 learners correctly interpret metaphors in reading passages in their second language.

Finally, other researchers advocate activities that not only help students identify figurative uses of language, but also to critically interpret them. Littlemore and Low (2006a) advocate teaching activities to develop strategies to guess the meaning of words that have been figuratively extended, as well as to identify and evaluate metaphors in a reading text to critically interpret the reading passage (p. 202). Indeed, Tapia (2006) describes how incorporating conceptual metaphor theory into a critical reading class for native speakers facilitated close reading of texts by showing how metaphor can "affect our behavior and attitudes and how it may carry bias" (p. 140). She gives examples of class activities for training students to recognize and analyze conceptual metaphors, as well as examples of how her students were able to apply conceptual metaphor theory to literary analysis, allowing them to "further appreciate the

relationship of experience to language, and of language to literature" (ibid*).* Another study designed by Littlemore (2001a) examined the link between metaphor awareness and critical reading ability in international students. When she asked students in two groups to critically evaluate a piece of reading, Littlemore (2001a) found that seven out of fifteen students in an experimental group that had previously attended a metaphor awareness raising session made explicit references to underlying conceptual metaphors to support their critical evaluations, whereas none in the control group did. Moreover, the students in the experimental group critically evaluated the metaphors in different ways, by showing how metaphors can generalize and over-simplify issues, by highlighting how metaphors can be interpreted in different ways, and by acknowledging the limitations of a particular metaphor (ibid*).* Taken together, these two studies suggest that metaphor instruction can improve students' critical thinking and critical reading abilities.

In general, the research on metaphor and reading comprehension shows that teachers need to help students first learn to identify metaphorical language, especially in the case of relatively "invisible" metaphors (Pickens, 2007, pp. 72-77). Next, explicit instruction of metaphor (Lai & Shen, 2013; Li 2011), as well as metaphor awareness raising activities (Pickens, 2007) can help students comprehend metaphors they find in reading passages. Finally, conceptual metaphor theory and deeper metaphor analysis could help students learn to evaluate metaphorical language and read more critically (Tapia, 2006). This research, along with other "best practices" reviewed above and CMT in general, was consulted when developing the reading lessons for this study.

1.5.5 Teaching metaphor for writing

First, increasing mastery and use of metaphor in writing has been shown to accompany increasing fluency and proficiency in a second language. Indeed, examining two hundred essays written by English language learners for Cambridge ESOL examinations, Littlemore, Krennmayr, Turner, and Turner (2014) found that not only do more proficient L2 writers utilize a higher density of metaphors in their writing, but they also use metaphor to accomplish increasingly sophisticated functions. However, Littlemore et al. (2014) also found that the learners' metaphor error rate was higher than the overall error rate and that L1 influence contributed to metaphorical errors (pp. 139-141). They conclude that "at any stage of learning, learners are more likely to make errors when using metaphor than when using other types of language," and recommend focusing on metaphor throughout the learning process (ibid).

Nacey (2013) compared texts written by L1 Norwegian speakers in the NICLE with British A-level texts from the LOCNESS corpus. She found that metaphor was prevalent in both texts, accounting for around 18% of the words in the NICLE corpus and 16.7% of the British A-level texts from the LOCNESS corpus (Nacey, 2013, p. 242). In addition, Nacey (2013) found that novel metaphor represented only about 3-5% of the total metaphors, showing that both native and non-native novice writers use highly conventionalized rather than novel expressions (p. 152). Thus, she found that for the most part, the L2 writing she examined upheld L1 English norms rather than transferring metaphorical expressions from the writer's native language or deliberately utilizing creative, novel metaphors (Nacey, 2013, p. 205). Moreover, much of the L2 writers "novel" metaphor use could be attributed to incorrect preposition use caused by L1 transfer; that is, Nacey (2013) found that much of the novel metaphor use of the non-native speakers was actually due to language error (p. 237-238).

Other research has focused more explicitly on metaphorical errors in L2 learners' writing. For example, Kathpalia and Carmel (2011) found that the metaphorical errors of ESL students in Singapore detracted from their writing abilities. First, focusing on students' grammatical and linguistic competence, they found that 88% of the student papers contained miscolloctions, including noun phrase miscollocations, verb phrase miscollocations, and unidiomatic clichés and idioms (Kathpalia & Carmel, 2011, p. 281). Examining textual competence, they found that students' attempts to use metaphors to link text both within paragraphs and throughout their papers was often stylistically inappropriate. In fact, Kathpalia and Carmel (2011) found not only that just 15% of textual metaphors were accurately used in students' writing, but also that 23% of the texts lacked any kind of metaphor for textual cohesion at all (p. 284). For illocutionary competence, they found that the students were able to use metaphor for conveying information and evaluation, but not for other functions. Finally, while their research did not reveal serious issues with sociolinguistic competence in the student writing, Kathpalia and Carmel (2011) did find that cross-cultural interference, L1 transfer, and inappropriate choice of register influenced the students' ability to accurately use metaphor within their writing (p. 287). They conclude that the pervasiveness of metaphor in all aspects of language makes metaphoric competence a necessity for achieving proficiency in the target language and argue for promoting the development of metaphorical language among language learners within the language curriculum.

MacArthur (2010) gives specific suggestions for incorporating metaphor into writing instruction. She suggests teachers prepare students to write on abstract topics by not only exposing them to texts on similar topics, but also by reviewing source domain language relevant to the target domain (p. 169). For example, before giving students a writing prompt about lifestyle choices, careers, future goals, or love and marriage, teachers might usefully review

language related to PATHS, JOURNEYS, and DESTINATIONS through readings, explanations, other writing tasks, or focused activities (ibid). MacArthur (2010) also recommends activities for raising students' metaphor awareness, such as discussion of L1 transfer in metaphor and the use of "user-friendly" metalinguistic terms for discussing metaphor, as well as encouraging students to consult large electronic corpora or thesauruses instead of relying on bilingual dictionaries when writing.

In brief, research on metaphor and L2 writing has emphasized the link between proficiency level and metaphor use (Littlemore et al., 2014; Ryhshina-Pankova, 2010) as well as identified L2 learner errors (Kathpalia & Carmel, 2011). Littlemore and Low (2006a) suggest that students must be shown how to "use figurative language creatively, appropriately, and, at times, persuasively" in writing (p. 203). This is because strategic use of tenses and grammatical metaphor can strengthen students' academic writing, and also because learning how to control metaphor can help students impart both structure and coherence to their writing (ibid). As a result, one aim of this study is to determine whether direct instruction of metaphor based on the research reviewed here can help L2 students learn to use metaphor more appropriately and effectively in their writing.

1.5.6 Teaching metaphor for listening

In general, research has shown that understanding metaphorical language in academic lectures can be challenging for L2 learners. As mentioned in section 1.5.1, Littlemore et al. (2011) found that metaphor accounted for 41% of lexically familiar but problematic items students encountered in three university lectures in the UK. Moreover, they highlight the frequent issue of metaphor misunderstanding, in which the students believed they had correctly interpreted a metaphor that they had in fact misinterpreted (ibid). This means that, believing they

understand the lecturer's metaphors, international students might not seek clarification, affecting their global understanding of the lecture. Due to the difficulties learners face understanding spoken metaphor, Littlemore and Low (2006a) recommend helping students identify signalling devices used to signal metaphorical language in listening passages, as well as raising their awareness of the wide range of functions performed by idioms and other metaphorical language (p. 203). Furthermore, they believe students may also need help identifying the evaluative function of metaphorical language they encounter in listening texts (ibid).

Indeed, Vanlancker-Sidtis (2003) found that learners of English performed significantly worse than native speakers in distinguishing between idiomatic and literal meanings in a listening task. She first recorded native speakers reciting ambiguous sentences with an intended literal meaning and with an intended idiomatic meaning, and then tested native speakers, fluent nonnatives, and ESL students on their ability to recognize the intended meaning. Vanlancker-Sidtis (2003) found that the ESL students were unable to recognize subtle prosodic contrasts that help native speakers identify idiomatic meaning, suggesting that recognizing metaphorical language in listening tasks may pose an additional challenge for L2 learners.

While these studies emphasize the challenges posed by metaphor, Littlemore, MacArthur, Rubienska, and Turner (2013) remind us that "metaphors also have the potential to facilitate and improve communication" (p. 23). Observing a lecturer describing two theoretical models to two different international students, Littlemore et al. (2013) found that metaphor and metaphorical gestures facilitated comprehension and recall of content as well as overall communication between the lecturer and the students (p. 47). Moreover, the lecturer used deliberate metaphor both in language and in gesture to explain the concepts to the students (ibid). Similarly, examining office hour discussions between university lecturers and Spanish-speaking

undergraduates, MacArthur, Krennmayr, and Littlemore (2015) found that SIGHT metaphor serve an important function in academic mentoring in English. However, they also noted that since the Spanish-speakers used vision terms less frequently and with different meanings than their English-speaking interlocutors, the use of metaphor during office hours could potentially hinder rather than facilitate conversations due to cross-cultural and cross-linguistic differences (ibid)

Overall, research suggests that metaphor in listening tasks can be challenging for non-native listeners (Littlemore, 2003; Littlemore et al., 2011; Vanlancker-Sidtis, 2003). Not only is metaphorical language difficult for students, they might not even realize they have misinterpreted a figurative expression (Littlemore et al., 2011). In addition, ESL students are less likely to recognize prosodic changes that help native listeners identify idiomatic expressions (Vanlancker-Sidtis, 2003). Moreover, while linguistic and gestural metaphor can facilitate communication between speakers (Littlemore et al., 2013), cross-cultural and cross-linguistic variation might make this use of metaphor less effective between speakers of differing linguistic backgrounds (MacArthur et al., 2015). Although research has shown that metaphor in listening passages might be problematic for L2 learners, no studies have investigated actual teaching methods to address this issue. The current investigation aims to bridge this gap by developing and testing the effects of three separate listening lessons designed to help students improve their metaphor awareness and metaphoric competence for listening passages.

1.5.7 Teaching metaphor for spoken discourse

Most research into L2 speakers and metaphor has either focused on vocabulary acquisition or gesture use rather than on the spoken discourse itself. One exception is Cameron (2003a), who found that "tuning words" such as actually, just, in a way, or sort of, often

accompany metaphorical language in L1 spoken discourse. She found that these words serve a variety of functions, including "to alert an interlocutor to unexpectedness in discourse, to direct his or her interpretation, and to adjust the strength and emphasis of a metaphor" (p. 159). Although her research focused on L1 speakers and not on L2 learners, the results have implications for language instructors, who can include these tuning words in their teaching materials if they want to incorporate metaphor instruction into speaking lessons.

In addition, a number of researchers have suggested that teaching methods based on Conceptual Metaphor Theory (CMT) or other cognitive linguistics research can lead to better vocabulary acquisition of idioms and phrasal verbs (Boers, 2000; Boers, 2004; Kalyuga & Kalyuga, 2008; Kövecses, 2001; Yasuda, 2010). In a series of three experiments, Boers (2000) found that focusing on metaphor awareness by organizing vocabulary by conceptual metaphor or by source domain led to better vocabulary retention by L2 learners of new metaphorical expressions. Similarly, Kalyuga and Kalyuga (2008) found that presenting vocabulary in chunks related to a single metaphorical theme helps learners establish mental associations, speeds up learning, and reduces potential cognitive overload (p. 255). Other studies have suggested that organizing idioms along metaphorical themes and teaching conceptual metaphors in conjunction with phrasal verbs can also aid in vocabulary acquisition (Berendi, Csabi, & Kövecses, 2008; Boers, 2004; Kövecses, 2001; Yasuda, 2010). These studies suggest that conceptual metaphor theory and cognitive linguistics research can inform effective teaching methods for improving students' vocabulary acquisition and retention of phrasal verbs, idioms, and other metaphorical language, which would all be useful for spoken discourse if students are actually able to incorporate them into their spoken production.

Other research into L2 speakers and metaphor has focused on gesture use. Gestures are spontaneous movements of the arms and hands that occur with speech, and can be considered an integral part of language and communication (Kendon, 2005; McNeill, 1992; McNeill, 2005). Just as metaphor can be encoded linguistically, it can also appear in speakers' gestures. Since speakers create their own images of the abstract, metaphorical gestures can differ both culturally and individually (McNeill, 1992, pp. 163-164). Module 2 of this thesis explored how L2 learners' gesture use can affect perceptions of their language abilities as well as their overall communicative competence (Hilliard, 2015a; Hilliard, 2015b). Gesture was shown to improve L2 learners' communicative abilities by helping them overcome vocabulary deficiencies, increase discourse cohesion, increase imagery in narratives, and express abstract ideas (Hilliard 2015a, pp. 33-42). A follow-up study investigated class instruction targeted towards improving students' gesture skills. Gesture awareness-raising tasks were found to significantly increase students' overall rate of metaphorical gesture, particularly for a discussion task and a narrative task (Hilliard, 2015b, p. 25). Moreover, gesture awareness-raising activities helped students learn to gesture more fluently and more similarly to the gestures of native speakers completing the same tasks *(*ibid*).* While gesture is an important component of communication, it was not included within the scope of this study as the main focus of the speaking lessons was effective use of linguistic metaphor expressed during spoken discourse.

Thus, research into metaphor and L2 speech has mostly focused on vocabulary acquisition and learners' gesture use. Research suggests that teaching methods based on Conceptual Metaphor Theory (CMT) or other cognitive linguistics research can lead to better vocabulary acquisition and retention of idioms and phrasal verbs, which could be useful for spoken discourse (Boers, 2000; Boers, 2004; Kalyuga & Kalyuga, 2008; Kövecses, 2001). In

addition, the way students gesture can affect both their overall communicative abilities in a second language as well as others' perceptions of their language skills (Hilliard, 2015a). Although the metaphor classes in this study did not include a focus on gesture, they tried to expand on previous research by including a focus on specific metaphorical language that could be used to accomplish specific speaking tasks.

1.5.8 Summary

First, research has suggested that metaphor not only occurs with some prevalence in academic settings, but also that it can be difficult for L2 learners to understand and interpret (Littlemore 2001c; Littlemore, 2003; Low et al., 2008: Simpson and Mendis, 2003). Therefore, students might benefit from metaphor instruction in their L2. In addition, it was suggested that both an EFL context and an ESL context have advantages and disadvantages when it comes to teaching figurative language. Compared with EFL students, learners studying in an ESL environment might benefit from increased cultural knowledge as well as linguistic input through their everyday interactions with the target language community. On the other hand, EFL courses are usually composed of students from the same cultural and linguistic background, depending on the specific context. This makes it easier for teachers to predict learner difficulties, chose specific expressions to target or source domains to explain, and create lesson plans for the entire class. As this study was carried out in both an EFL and an ESL context, these issues had to be taken into consideration.

Next, some general principles or recommendations for teaching metaphor can be drawn from the above research. First, it has been suggested that explicit instruction that actively engages learners with metaphorical expressions in the target language might be effective for developing both learners' metaphor awareness and metaphoric competence (Littlemore & Low,

2006a; Low, 1988). For example, teacher guided "querying routines" can help students practice "thinking figuratively" and also increase their autonomy when confronting new expressions (Littlemore & Low, 2006a). Littlemore and Low (2006a) also recommend a teaching approach that combines *language play*, which encourages students to experiment with the figurative potential of words and phrases, with task-based learning, which provides learners with focused language-learning tasks and activities (p. 198).

Moreover, researchers studying metaphor and L2 learners have investigated how learners comprehend, interpret, and use metaphor in the four skill areas. In reading, explicit instruction of metaphor and metaphor awareness raising activities can help students both comprehend and critically evaluate metaphorical language they find in reading passages (Lai & Shen, 2013; Li, 2011; Picken, 2007; Tapia, 2006). Research in L2 writing has mainly emphasized the link between proficiency level and metaphor use (Littlemore et al., 2014; Ryhshina-Pankova, 2010) and identified students' errors (Kathpalia & Carmel, 2011), rather than examined the effects of explicit metaphor instruction in L2 writing classes. Similarly, although researchers have shown that metaphor may pose additional challenges for non-native listeners (Littlemore et al., 2011; Vanlancker-Sidtis, 2003), they have not examined the effects of focusing on metaphor in L2 listening classes. Finally, while research in metaphor and L2 speech has shown the importance of gesture in communication (Goldin-Meadow 2003; Kendon 2005; McNeill 1992; McNeill, 2005) and highlighted cross-cultural issues for language learners (Kendon, 2004; Kita, 2003; Kita, 2009; Hilliard, 2015a; Sherman & Nicoladis, 2004; So, 2010), again, no studies have investigated explicit instruction of metaphor use for speaking in the L2 classroom.

The current study aims to expand on previous research by actually applying these recommendations along with insights from the studies reviewed here in the language classroom.

The goal was to evaluate the effectiveness of explicit metaphor instruction in reading, writing, listening, and speaking on students' metaphor awareness and metaphoric competence, and to determine if this improved their overall communicative competence. While linguists frequently claim that language instructors need knowledge of applied linguistics theories and research, teachers often fail to transfer this knowledge to their L2 teaching (Bartels, 2005). In response, this study aims to provide empirical research on the effects of one teacher applying her knowledge of applied linguistics to L2 metaphor instruction.

1.6 Conclusion

As we have seen in this chapter, cognitive linguists emphasize meaning and context, believing that linguistic structure is the direct result of cognition since language choices reflect a particular way of conceptualizing the world (Lee, 2005, p. 1). As such, in cognitive linguistics, special focus is placed on studying figurative thinking and metaphorical language. For this study, the focus was on both metaphor, or cognitive and linguistic mappings of a source domain onto a unrelated target domain, and metonymy, in which one concept provides mental access to another, related concept. Moreover, while there are many theories of metaphor in both applied linguistics and other disciplines, only two have been reviewed here: Conceptual Metaphor Theory (CMT) and Conceptual Blending. This is because the aim of this study is not to review the merits of various theories, but rather to determine the effects of using these two influential theories as well as other metaphor research to inform teaching materials and methods for teaching metaphor and metonymy in both an EFL and an ESL context. The key to both theories is that metaphor is an important component of everyday thought and language, and as such, represents an essential part of L2 communication.

As we have seen, second language learners face linguistic, cultural, and cognitive challenges when confronted with metaphor in their L2, especially if their first language is very culturally different from their L2 (Trim, 2007). Moreover, as research shows not only that metaphorical language is prevalent in everyday communication (Lakoff & Johnson, 1980), but also that metaphor poses additional challenges for students in academic settings (Littlemore, 2001c; Littlemore, 2003; Low et al., 2008; Simpson & Mendis, 2003), teaching students to comprehend, interpret, and produce metaphor must be a top priority for the L2 classroom. Ultimately, the goal of this study was to test whether explicit metaphor instruction could improve both L2 students' metaphor awareness as well as their metaphoric competence in their second language.

Moreover, in this chapter, we saw how research into metaphor and the four skills can recommend guidelines for "best practices" for L2 instructors teaching metaphorical and metonymic language within the curriculum. While knowledge of applied linguistics can help teachers develop professionally, it is not always applied directly to the language classroom (Bartels, 2005). The current study aims to directly apply cognitive linguistics theory and research on metaphor and metonymy in the language classroom to develop materials, lesson plans, and teaching techniques for explicit metaphor and metonymy instruction. Furthermore, while the studies reviewed here have investigated metaphor and L2 instruction, few studies have examined the effects of a larger number of metaphor lessons in the language classroom. The current study aimed to close this research gap by investigating the effects of explicit metaphor and metonymy instruction through either an 8-week or semester-long course in both an EFL and an ESL setting.

2. Methodology

This two-part study aims to expand on previous metaphor research by examining the effects of explicit teaching methods focused on metaphor and metonymy in both an EFL and an ESL context. Participants received metaphor instruction during either an 8-week session or a 20 week semester, and a pre-test and post-test in all four skill areas along with a metaphor interpretation task were used to determine the effects of the lessons. In addition, the ESL students were given a metaphor awareness test at the beginning and end of instruction, and both groups of participants completed an evaluation form during the last class. Multiple raters were used to score the written and spoken parts of the assessments, and a modified form of the Metaphor Identification Procedure (MIP) (Pragglejaz Group, 2007) and Metaphor Identification Procedure VU University Amsterdam (MIPVU) (Steen et al., 2010a) was used to code for metaphor related words. These assessments provided both quantitative data, through scores and ratings, as well as qualitative data, through deeper analysis of participants' interpretative abilities on the quotation interpretation task as well as productive use of metaphor and metonymy in both speaking and writing.

2.1 Research questions

To determine the effects of the metaphor instruction, this study addressed the following research questions:

1. How does explicit instruction in the use of metaphor affect students' receptive skills on passages containing metaphorical expressions?
2. What are the effects of explicit instruction in the use of metaphor on students' ability to understand and interpret metaphor in their L2?

3. How does explicit instruction in the use of metaphor and metonymy affect students' abilities to use metaphor and metonymy in written and spoken production?

4. How does explicit instruction in the use of metaphor and metonymy affect student performance in an ESL context compared with student performance in an EFL context?

2.2 Participants

The participants for the first half of this study in an EFL context were 21 university students studying at IKIAM University, a public university in Tena, Ecuador. The students were all first year students enrolled full time at the university and studying science. The participants ranged in age from 18 to 20 years old, spoke Spanish as their first language, and studied English in an EFL environment. They studied in a four-skills class and received three lessons targeting metaphor use in reading, writing, listening, and speaking for a total of twelve metaphor classes during an entire 20 week semester, from October 2015 to February 2016. The EFL students were divided into two groups: an experimental group of 11 students and a control group of 10 students. Due to the low number of English classes offered at the university, the groups encompassed two different levels of advanced English within the university's English program. The experimental group was comprised of students taking the Level 5 class while the control group was composed of students from the highest English class, Level 6. Unfortunately, this meant that for logistical reasons, the curriculum the students studied as well as the overall proficiency level was different between the experimental and control group.

The participants in the second half of this study, which took place in an ESL context, were 47 advanced students at the Intensive English Program (IEP) at Arizona State University in Tempe, Arizona. These students ranged in age from about 18 to 45 years old and comprised a variety of language and cultural backgrounds, including Arabic, Japanese, Chinese, Korean, and

Spanish speakers. Following the general curriculum of the IEP, the students were divided into reading/writing and listening/speaking classes, and received 6 classes on metaphor in the two skill areas during an 8-week session. These students all came from the IEP's highest level, Advanced 2, and comprised 4 groups: an experimental group of 11 students and a control group of 12 students for the reading/writing class, and an experimental group of 12 students and a control group of 12 students for the listening/speaking class. Since each reading/writing and listening/speaking class is offered at only one time during the day, the experimental group and the control group studied during two different eight-week sessions during the fall semester from August to December 2016. While the listening/speaking curriculum was generally the same between the two sessions, the reading/writing curriculum for the first session with the experimental group focused on "globalization," while the curriculum for the second session with the control group focused on the theme of "heroes/risk-takers." This difference in the curriculum affected the writing tests the students took, which will be discussed more in section 2.3.

Unlike previous studies, this research project examined teaching methods in both an EFL and an ESL context. It was hypothesized that each context would provide its own set of advantages and challenges. First, as mentioned in the literature review, accurate metaphor interpretation requires sufficient cultural knowledge, meaning that figurative expressions motivated by less salient source domains may be more difficult for L2 learns to comprehend and recall (Boers et al., 2004). ESL students who are immersed in the target language culture gain cultural knowledge through their everyday interactions and may find it easier to understand these types of expressions, such as idioms related to sports or food. In addition, ESL students benefit from the opportunity to interact with the target language community and come into contact with authentic metaphorical expressions used by native speakers in context; in contrast, EFL students

must rely more heavily on input from teachers and English language textbooks, which tend to have inadequate coverage of metaphor (Alejo González et al., 2010; Littlemore & Low, 2006a). On the other hand, EFL classes are often comprised of monolingual students from the same cultural background, as was the case in this study. This makes it easier for teachers to predict and target expressions that will be more difficult for students, especially if the teacher has knowledge of the students' linguistic and cultural background. In contrast, it would be difficult for teachers to predict learner errors and difficulties in ESL classes comprised of students from many different linguistic and cultural backgrounds.

The differences between the two groups of participants are summarized in the table below. In addition to the varying curriculum and levels discussed already, the ESL groups also took an additional test: the metaphor awareness test (adapted from Chen & Lai, 2012, see Appendix D). It was not clear if the EFL students had improved their ability to determine whether expressions were being used figuratively or not from the reading and listening comprehension tests as the test questions only asked students about pre-selected metaphorical expressions; therefore, the metaphor awareness test was added for the ESL students to determine if the metaphor classes might also improve students' abilities to identify metaphor in English sentences. As there were major disparities between the two groups of participants, the goal of the study was not to directly compare the results of the EFL participants with those of the ESL participants. Rather, the aim was to evaluate how metaphor instruction could have an impact on both the receptive and productive skills of each set of participants in their individual contexts. In addition, as previous studies have mainly focused on either ESL students or EFL students, this research project aimed to evaluate how the same cognitive linguistic approach to metaphor instruction was received in each context.

Table 4: Class Schedule for EFL and ESL Students

	EFL Students: Ikiam University, Ecuador	ESL Students: Arizona State University, U.S.
Length of Classes	20 Weeks, Full Semester	8 week sessions
Content of Classes	12 total (3 reading, 3 writing, 3 listening, 3 speaking)	6 total (3 reading, 3 writing OR 3 listening, 3 speaking)
Level of Classes	Level 5 (experimental) and Level 6 (control)	Advanced 2 level (August – October: experimental groups; October – December: control groups)
Class Assessments	Pre-Test and Post-Test (all four skills, including a video and writing task) Quotation Interpretation Task Class Evaluation Form	Pre-Test and Post-Test (Reading Test and Writing Sample OR Listening Test and Speaking Video) Quotation Interpretation Task Metaphor Awareness Test Class Evaluation Form

Finally, the study was approved by the Internal Review Board at both the University of Birmingham and Arizona State University, and all participants received participant information sheets about the research study as well as signed participant consent forms at the beginning of the study (see Appendix A).

2.3 Pre-test and post-test

While both the EFL and ESL students took a pre-test at the beginning of the class and a post-test after receiving class instruction, the ESL students only took either reading and writing tests or listening and speaking tests, depending on their class (see Table 3 above). This is because the EFL students studied in a four-skills general English class while the ESL students were divided into Reading/Writing and Listening/Speaking classes following the university's academic program. To ensure test validity, the pre-test and post-test were piloted first with a non-native English teacher and then with an advanced student who was not part of the study. The pre-test and post-test included up to 5 sections: reading comprehension, listening comprehension,

written responses to quotations containing metaphor, writing samples, and a series of three video-taped speaking tasks (see Appendix B and C). The reading comprehension questions featured news articles and asked students to interpret the main ideas and writer's position towards the topic, as well as specific instances of metaphor used in the articles. The listening comprehension questions featured lectures from Ted.com and asked students to interpret the speaker's main ideas and position towards his topic, as well as specific instances of metaphor used by the speaker. The quotation interpretation task asked students to choose among a set of six quotations that included a metaphor and write a paragraph interpreting and explaining the quotation as well as a paragraph giving their own opinion. For the writing section, the EFL students completed a narrative writing sample, while the ESL students completed academic writing samples. For the EFL students, a generic narrative task was chosen because the experimental group and control group comprised different levels and, as narrative writing tasks were not a specific part of either level's curriculum, the narrative task would represent a fair comparison of the students' progress. On the other hand, the ESL students completed an academic writing task to better align the research with the curriculum covered in the classes as the experimental group and the control group were from the same level. Both the ESL control group and the ESL experimental group's writing task was to read an article and write a summary; however, because of the difference in timing of the two classes, the topic of the article was different for each group. Finally, the speaking section included three video-taped tasks: discussing opinions, telling a narrative, and describing a graph. While both the pre-test and post-test discussion questions for the EFL students were related to the environment, the post-test discussion questions for the ESL students were related to art to better align the post-test with the course curriculum they had been studying.

Finally, the ESL students also completed a metaphor awareness test at the beginning and end of the session, regardless of whether they were in the reading and writing class or the listening and speaking class. The metaphor awareness test asked students to evaluate whether individual sentences were literal or figurative on a scale of 1 to 5, with 1 representing completely literal, 5 indicating the sentence contained at least one figurative expression, and 3 meaning that the student was not sure (adapted from Chen & Lai, 2012, see Appendix D). As the comprehension tests do not ask students to identify whether a phrase is metaphorical or not, it was not clear from the comprehension test scores alone how much the metaphor classes might have affected students' abilities to identify metaphor. Therefore, the metaphor awareness test was added after the initial research with the EFL students to determine how the metaphor instruction might specifically affect students' metaphor awareness. Finally, all students completed a class evaluation form (see Appendix E) at the end of class in order to identify their attitudes and opinions towards the metaphor instruction. This form showed whether students thought it was important to study metaphor and how open they were to the metaphor classes overall.

2.4 Rating

To determine the effects of the metaphor classes, each student received a rating from two to three separate raters for performance on the quotation interpretation tasks, the writing tasks, and the speaking tasks. First, the quotation interpretation task was rated by two separate graders on a scale of 1 to 5 in three separate areas: metaphor identification, metaphor interpretation, and expressing opinions (see Appendix F). The metaphor identification section evaluated how well students could identify different elements of the metaphor while the metaphor interpretation section evaluated how well students could interpret the writer's evaluative stance, perspective,

and overall use of the metaphor. Finally, the expressing opinions section analyzed how well students could respond to the writer's metaphor with their own opinion. The quotation interpretation task was first rated by the primary researcher and then by a secondary rater, with the two scores averaged to produce a mean score for each participant. Afterwards, to check for inter-rater reliability, the intraclass correlation coefficient was calculated for the overall metaphor quotation score using SPSS. A coefficient of 0.822 was found, indicating good levels of inter-rater reliability for the quotation interpretation task.

Performances on the narrative writing task and the summary/response writing task were rated differently. For the narrative writing task, three independent raters used a writing rubric based on the Common European Framework (CEFR) that included ratings for task achievement, organization and cohesion, range and accuracy of vocabulary, and accuracy of grammar, and the three scores were averaged to produce a mean score for each participant (see Appendix G). Since the narrative writing tasks were completed independently of the English curriculum, new rubrics had to be developed to evaluate the students. On the other hand, the summary/response writing task was part of the standardized curriculum for the Advanced 2 class at ASU; therefore, the standardized rubric and the scores the participants received in their class was used for the summary/response task (see Appendix G).

For the speaking tasks, the students' videos were first edited into one and a half minute segments and the video quality and sound were improved using Audacity. The shorter segments were chosen to ensure not only that each participant was rated using the same length of video, but also that the videos were manageable for both the rating and transcription process. Next, the videos were rated by three independent raters using the IELTS and TOEFL speaking rubrics, which include overall ratings for fluency and coherence, lexical resources, grammatical range

and accuracy, and pronunciation, as well as specific task completion ratings for each task (see Appendix H). Finally, the four IELTS scores were averaged to get a mean IELTS score for each participant, and the three scores for each task were averaged to get a mean task score for each participant.

In addition, the rating order mixed the two groups and the pre-test and post-test writing samples and videos to ensure rater validity. That is, raters blindly alternated between rating the control group and the experimental group samples as well as between pre-test and post-test samples, as shown in the table below. Moreover, in order to ensure as much participant confidentiality as possible, student samples were anonymized using numbers to label each student rather than names.

Table 5: Rating Order

Group	Test Sample
1. Control	Pre-Test
2. Experimental	Pre-Test
3. Control	Post-Test
4. Experimental	Post-Test

After the rating, the inter-rater reliability for the writing and speaking scores was calculated using the intraclass correlation coefficient in SPSS, as shown in Table 6 below. The inter-rater reliability scores were calculated separately for the EFL and ESL students as there were different raters for each group. Overall, it can be seen that there was an acceptable amount of inter-rater reliability for all tests except for the IELTS scores of the ESL students. As the same raters showed acceptable levels of inter-rater reliability on the ESL students' average task scores, it is unclear exactly why there was less agreement among the raters for this particular test; however, it is believed that by averaging the scores of the raters, it was still possible to obtain a fairly reliable score for each student.

Table 6: Inter-rater reliability scores for Average Task Score and Average IELTS Score

	Intraclass Correlation: Average Task Score	Intraclass Correlation: Average IELTS Score	Intraclass Correlation: Average Writing Score
EFL Students	.707	.706	.680
ESL Students	.714	.491	N/A

Following this procedure, it was possible to obtain objective scores for each productive task on the pre-test and post-test used in this study. By anonymizing the students, using objective rubrics, and averaging the scores of multiple raters, it is believed that the pre-test and post-test scores obtained in this study accurately reflect the students' written and spoken abilities.

2.5 Metaphor/metonymy classes

The classes included explicit instruction of metaphor and metonymy based on CMT and the cognitive linguistics research outlined in the literature review. This included direct instruction of metaphor, metonymy, simile, and personification, with three 75-minute classes for each skill area. The first class for all students included a powerpoint that defined metaphorical language, explained why it is important, and gave examples of metaphor with source to target domain mappings (see Appendix I). This introductory lesson also included two explicit examples of conceptual metaphor: TIME IS MONEY and AN ARGUMENT/DEBATE IS A WAR. This powerpoint also ensured that all students in the experimental groups received the same introductory information on conceptual metaphor theory and direct instruction of metaphor.

Next, the three reading classes focused on identifying metaphor in authentic reading texts (see Appendix J). The first class included a warm-up where students worked in small groups to try to explain a series of advertisements and cartoons that contained metaphorical expressions or images. Then, students were given sets of newspaper headlines grouped by topic and were asked to identify the overarching metaphor used in the headlines as well as the writer's perspective towards the topic. For homework, students had to write their own newspaper headlines about

current events using metaphor. During the second reading class, students worked with an article about marijuana. After students read the introduction, identified some figurative expressions in the article, and discussed them together as a class, the students were broken down into smaller groups for a jigsaw reading activity on the rest of the article. Each group read part of the article written from the perspective of a different scientific researcher, identified metaphorical expressions in their section of the article as well as the scientist's opinion, and then met with students who had read the other parts of the article to discuss. For homework, students had to read a different article and identify metaphor, along with the writer's opinion, which were discussed at the beginning of class the next day. For the final reading lesson, students completed a worksheet on different types of metonymy before reading an article, finding metonymy and other figurative expressions in the article, and then discussing the topic as a class. For homework, students were asked to find three other examples of metonymy in newspaper headlines, which were again discussed at the beginning of class the next day. The reading lessons built on previous metaphor research by raising students' awareness through explicit metaphor instruction, building student autonomy by having students identify metaphor in authentic reading passages themselves, and encouraging critical reading skills by having students identify the writer's stance or opinion. Moreover, the teacher was able to guide students through "querying routines" (Littlemore and Low, 2006a) for metaphorical language they were not easily able to comprehend in their groups, as well as provide cultural or source domain knowledge to understand less "visible" or salient expressions. It was hoped that the classes would improve students' metaphor awareness through explicit instruction as well as their metaphoric competence by encouraging students to identify and explain metaphorical expressions on their own.

Like the reading classes, the three listening classes focused on identifying and understanding figurative expressions in authentic listening passages (see Appendix K). In the first class, students watched a short TED talk explicitly explaining metaphor, listened and underlined metaphorical expressions in an Elvis Presley song, and worked through some conceptual metaphors for life before analyzing the song "Life is a Highway." For homework, students were asked to find metaphors in other English songs and bring the lyrics to discuss in class the next day. In the second listening class, students watched a TED talk lecture about food waste with guiding questions to help them identify metaphor and metonymy in the video. At the end of the class, students role-played interviewing the TED talk speaker in pairs. Finally, in the third class, the EFL students watched another TED talk about the environment while the ESL students watched a TED talk about art and statistics to better align the classes to the curriculum they were studying. Both sets of students watched the TED talks with guiding questions to help them identify and understand the metaphors and metonyms in the videos and were asked to watch the videos a second time for homework. Like the reading classes, the listening classes were designed to improve students' overall metaphor awareness by emphasizing the use of metaphor in a number of listening passages, as well as their autonomy by having students work together to explain and understand authentic figurative expressions. In addition, the classes aimed to help students increase their metaphoric competence by asking them to interpret the speakers' opinion as well as metaphorical meanings in context.

The writing classes focused on using metaphor in writing (see Appendix L). The first class started with a warm-up based on blending theory that asked students to identify what was combined in advertisements to create something new, as well as the effect. Next, students were encouraged to write creative metaphor by writing concrete nouns, abstract nouns, and adjectives

on blank cards and mixing them to create a new metaphor in the form of ADJ + concrete noun + abstract noun. Finally, students were put into groups and given environmental advertisements containing metaphor to make a new environmental campaign with a metaphorical slogan, which were presented in class the next day. In the second writing class, students warmed-up by free writing on a conceptual metaphor before analyzing other writers' quotations containing metaphor. After discussing in small groups, the students chose one quote and wrote one paragraph explaining the quotation and one paragraph responding to it with their own ideas. Finally, students chose a topic and wrote their own quotation containing a metaphor along with a paragraph explaining their metaphor for homework. The last writing lesson focused on narratives for the EFL students and describing graphs for the ESL students since the two groups of participants had different writing tasks on the pre-test and post-test. The EFL students reviewed previous lessons on metaphor and simile, wrote similes and metaphors to describe a family member and a place, and then wrote two descriptive paragraphs about their family member and a place. Next, students learned some phrases for describing emotions and wrote another paragraph. Finally, for homework, students had to write a story that included descriptions of people, places, and emotions, which was shared and peer-reviewed in class the next day. In contrast, the ESL students completed the third speaking lesson for written practice. First, students learned vocabulary for describing graphs and practiced describing their own graph as well as completed the gap-fill graph activity with a partner. For the final activity, students had to write a paragraph describing one of the graphs. Students finished writing their paragraph for homework and shared in class the next day with peer feedback. Focusing on graphs in the last class was thought to be more useful for the ESL students than focusing on narratives since the ESL students were preparing to enter an American university and since many of the students were also studying for

the IELTS, which includes a writing task on graphs. Overall, the writing classes built on blending theory by having students analyze advertisements and write new creative metaphors and also aimed to develop students' metaphor awareness and metaphoric competence by having students analyze quotations. In addition, it was hoped that the explicit focus on metaphor for description would encourage the EFL students to use more metaphors in their narratives while the explicit focus on metaphor in quotations would improve the ESL students' performance on the summary/response writing task.

Finally, the speaking classes revolved around metaphor used in three separate speaking tasks: a discussion task, a narrative task, and a graph description task (see Appendix M). For the discussion task, the students warmed-up by discussing some simple topics in pairs before going over phrases for agreeing, disagreeing, and giving opinions that included some figurative expressions. Students then practiced with more serious topics and prepared to have a formal debate in another class period. For the narrative task, students went over a worksheet on similes and metaphors, practiced creating their own similes and metaphors, watched a video of a native speaker telling a story, and then practiced telling their own story with their original similes and metaphors to several classmates. Lastly, the graph description lesson started by going over a number of metaphorical expressions, including motion adverbs and adjectives, for describing graphs. Next, students practiced in pairs by first drawing and describing a graph for their partner, completing a graph matching activity, and finally making a short presentation on a graph for their partner. These lessons built off of both CMT and blending theory, for example by presenting a number of conventional similes in the narrative class before having students make their own creative similes and metaphors. In addition, it was hoped that providing figurative expressions for debating as well as for describing graphs would encourage students to use more metaphorical

language in their own speaking.

The control groups received the same number of classes for each topic without the emphasis on metaphor. For example, the students in the control group read the same reading texts and listened to the same listening texts with traditional listening or reading comprehension questions that did not focus on metaphor. They also had a lesson on each speaking task that excluded the metaphor instruction. For example, the narrative lesson for the students in the control group focused on telling a story with a clear beginning, middle, and end, and the debate lesson focused on including plenty of details, examples, and sources to defend one's point. For the writing classes, students completed similar activities without the focus on metaphor, such as writing a story or responding to a quotation that did not include metaphor. This ensured that the students in the control groups would be exposed to the same input and practice the same speech functions as the experimental groups so that they could be compared later.

2.6 Metaphor/metonymy identification

As the focus of this study was metaphor, it was necessary to identify metaphor in the students' writing samples and videos, as well as the test articles and native speaker samples for comparison. As the MIP and MIPVU are the most widely accepted procedures for determining metaphor frequency, they were used to code metaphorical lexical items in the student samples, test articles, and native speaker samples (Pragglejaz Group, 2007; Steen et al., 2010a). In addition, Biernacka's (2013) procedure was used to identify instances of metonymy in the student samples, test articles, and native speaker samples. Moreover, as the classes included a focus on personification and simile, metaphor related lexical units were further classified into these categories. Finally, since the research included samples of non-native students, many of the metaphorically related words were used incorrectly in the L2 due to language transfer or

miscollocation. For example, the Spanish speakers used the phrase 'I have 20 years,' instead of 'I am 20 years old,' an instance of L1 languages transfer that resulted in a metaphorical use of the verb 'have.' Another example is the use of an incorrect preposition for a phrasal verb, such as 'look on' instead of 'look at'. While the phrasal verb would have used a different preposition metaphorically, the students chose the wrong preposition to accompany the phrasal verb, resulting in miscollocation. These lexical units were coded as "language error in metaphor." Once all test materials were coded and metaphor and metonymy frequencies were obtained, texts could be further analyzed to determine the effects of the instruction on students' productive metaphor use. The exact procedure used for coding metaphor and metonymy in this study will be further described below.

First, in this study, metaphorically used lexical units were identified using the Pragglejaz Group's (2007) MIP, along with parts of the later MIPVU developed by Steen et. al (2010a). The MIP, shown in Table 7 below, begins by reading and dividing a text into lexical units. Phrasal verbs, polywords, and other nondecomposable multiwords are considered single lexical units, along with all other individual headwords that appear in the *Macmillan English Dictionary for Advanced Learners* (MEDAL). Following the MIP, lexical units are identified as being potentially metaphoric if the meaning in context differs from its most basic, dictionary definition and can be understood by means of comparison with that basic definition. According to the MIP, rather than accepting the first entry in the dictionary as the basic meaning, the researcher should choose the entry that is more concrete, more related to bodily action, more precise, and historically older. Following this procedure, any time a student used a lexical unit in their writing or speaking in a way that differed from the basic, dictionary definition and could be understood in comparison with that basic definition, the lexical unit was flagged as a metaphor related word.

In addition, following the more recent recommendations in MIPVU, potentially metaphorically used lexical units that appear in the form of pronouns that refer back to metaphorical antecedents were also coded as metaphorical language. As this study involved a very large amount of data (over 65,000 lexical units) to code and only one primary researcher, the student samples were originally coded using the procedure outlined here by just the primary researcher. To confirm that the coding was accurate, a smaller sample was coded by a second rater and fairly high inter-rater reliability scores were obtained. This is in line with Nacey's (2013) study in which a second rater only analyzed about 5% of the lexical units for inter-rater reliability due to the large amount of text (p. 116). Inter-rater reliability rates for metaphor coding in this study will be discussed in more detail later in this section.

Table 7: Pragglejaz Metaphor Identification Procedure (2007, p. 3)

1. Read the entire text–discourse to establish a general understanding of the meaning.
2. Determine the lexical units in the text–discourse
3. (a) For each lexical unit in the text, establish its meaning in context, that is, how it applies to an entity, relation, or attribute in the situation evoked by the text (contextual meaning). Take into account what comes before and after the lexical unit.
(b) For each lexical unit, determine if it has a more basic contemporary meaning in other contexts than the one in the given context. For our purposes, basic meanings tend to be
—More concrete [what they evoke is easier to imagine, see, hear, feel, smell, and taste];
—Related to bodily action;
—More precise (as opposed to vague);
—Historically older;
Basic meanings are not necessarily the most frequent meanings of the lexical unit.
(c) If the lexical unit has a more basic current–contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it.
4. If yes, mark the lexical unit as metaphorical.

The MIP and MIPVU treat phrasal verbs and multi-word phrases from the BNC as single lexical units; however, in this study, the individual parts of phrasal verbs and other multi-word phrases were analyzed separately for possible metaphoricity. This is because language learners may view multi-word phrases as novel compounds rather than fixed expressions and also because the metaphoricity of phrasal verbs may be more salient for L2 learners than for native speakers (Littlemore & Low, 2006a, p. 4). In addition, Nacey (2013) notes that L2 learners might produce non-standard phrasal verb-like constructions (p. 87). Not only can it be difficult to determine whether to count these as true phrasal verbs as the MIP requires the researcher to only mark phrasal verbs as single lexical units if they appear in the dictionary (ibid), but keeping these phrasal verbs separate allowed for further analysis of students' language error in this study. Therefore, as the participants in this study were not fluent speakers but rather L2 learners, it was decided not to follow the MIPVU's procedure for treating multi-word phrases and phrasal verbs as single lexical units for analysis.

In addition, while the word class of individual lexical units is ignored following the MIP, the MIPVU requires analysis by word class. That is, following the original MIP, a researcher would be able to compare the contextual meaning of a verb like "to squirrel" that does not have a conventionalized literal verb from with the basic meaning of the noun "squirrel." In contrast, a researcher following the MIPVU would need to compare the contextual meaning of "to squirrel" with some more basic sense of the verb "to squirrel," even if a non-metaphorical meaning of the verb does not exist and/or the relation between the noun and verb is clearly metaphorical. Concerning this issue, Deignan (2005) argues that words such as "dog," which have a literal sense in noun form but a metaphorical sense when used as a verb, should be counted as metaphorical when used in a metaphorical way, even though the noun and verb form are the

same (pp. 47-48). In the case of animal metaphors, the source domain words, which tend to be nouns, are mapped onto verbs in the target domain, making it difficult to compare the verb form with the most basic meaning of the noun form. However, as Deignan (2005) argues, for some mappings, the normal grammatical pattern involves a change of word class, so whether a word is used as a noun or a verb can affect its metaphoricity. That is, the process of creating a new verb form from an existing noun form extends the original meaning into a metaphorical one, so it is reasonable to compare the new verb form with the original noun form. As a result, this study followed the procedure of the MIP, so changes in word class that result in metaphorical uses when compared with the basic meaning of the original word class were included when coding for metaphorical lexical units.

Finally, another issue when using the MIP and MIPVU is determining the metaphoricity of common verbs and prepositions. Verbs such as *go, make, have, get*, and *put* have "multiple uses but minimal meaning," and their frequency within language data means that coding decisions related to these words can greatly influence quantified data (Cameron, 2003b, p. 72). This study followed the recommendations of Cameron (2003b) to use the physical senses of these words for their basic meaning, but not to analyze *do, have got*, and *have* with the sense of *become* as metaphorical (p. 72-73). Similarly, Cameron (2003b) argues that some prepositions have become so delexicalized that it is difficult to determine their primary sense (p. 73). While the physical and spatial meanings of other prepositions were used to determine metaphoricity in this study, the prepositions *of, for*, and *with* were not marked as metaphorically related words following Cameron's (2003b) guidelines. The only exception was the use of "with" to show agreement by indicating that you are physically "with" someone or something, as in the student example, "You are <u>with</u> the government?"

Although the MIP and MIPVU have been used in numerous studies, there are some drawbacks to these methods. First, the focus on analysis at the word level means not only that researchers may lose sight of the message and nuance of the text, but also that the process is very time-consuming, especially when analyzing large amounts of texts (Nacey, 2013, p. 85-86). Furthermore, using the MIP and MIPVU for identifying metaphor in L2 learners' written and spoken texts poses additional challenges for analysis as grammatical errors, poor vocabulary choices, and spelling errors can make it more difficult to understand the general context as well as determine the metaphoricity of specific lexical units (Nacey, 2013, p. 118). While Nacey (2013) generally did not find this to be a problem when analyzing the writing of Norwegian writers of English, the written and spoken samples in this study contained a number of mistakes, resulting in the additional coding of "language error in metaphor," discussed more below. Finally, determining the basic sense of a word in actual language data can be complicated, and checking the MEDAL does not always clarify the issue (MacArthur, 2015; Nacey, 2013). While the Longman Dictionary of Contemporary English (LODCE) and Oxford English Dictionary (OED) can also be consulted, conflated meanings along with the etymology of specific lexical units can make it difficult to determine how to code specific lexical units in a text (Nacey, 2013). Ultimately, Nacey (2013) recommends researchers explicitly identify any areas where they have deviated from the published MIPVU procedure, as has been done in this methodology section.

The MIP and MIPVU are intended only to code for metaphor related lexical units; however, this study included direct instruction not only of metaphor in general, but also of metonymy, simile, and personification. Therefore, in order to determine the effects of the explicit metaphor instruction, these categories needed to be coded in the student samples, test articles, and native speaker samples as well. Biernacka (2013) describes a process for identifying

metonymy which combines procedures from the MIP with Cameron's (2003) Metaphor Identification through Vehicle (MIV). Following the procedure, shown in Table 8 below, when lexical units in this study were identified as metaphorically related words but when the relationship was one of contiguity instead of direct comparison, the lexical units were coded as metonymy.

Table 8: Procedure for Identifying Metonymy (Biernacka, 2013, pp. 117)

1. Read the entire text to get a general understanding of the overall meaning. 2. Determine lexical units. 3. Decide on metonymicity of each lexical unit: a. For each lexical unit establish its contextual meaning – taking into account how it applies to an entity in the situation evoked by the text, as well as co-text (i.e. the surrounding text; what is said before and after the expression). Take co-text into account. b. For each lexical unit, decide if it has a more basic contemporary meaning in other contexts than the meaning in the given context. c. If the lexical unit has a more basic contemporary meaning in other contexts than the given context, and the contextual and basic meanings are different, determine if they are connected by contiguity, defined as a relation of adjacency or closeness comprising not only spatial contact, but also temporal proximity, causal relations and part whole relations. 4. If a connection is found in step 3c that is one of contiguity: check backwards and forwards to determine if any other lexical unit(s) belong(s) together semantically, thus determining the extent of the metonymy vehicle; and mark the lexical unit (or lexical units which belong together) as metonymy.

While this procedure seems straight-forward, one of the main difficulties of applying this procedure to actual data is that it can be difficult to distinguish metonymy from metaphor (Barnden, 2010; Biernacka, 2013; Littlemore, 2015; Nacey, 2013). For example, Barnden (2010) points out that many primary metaphors, such as KNOWING IS SEEING or MORE IS UP are grounded in experience and derived from metonymy, suggesting that some metaphors involve

"contiguity." Barnden (2010) goes on to explain how some metonymy involves "similarity," such as country names used to represent sports teams. He concludes that metonymy and metaphor are intrinsically "slippery" concepts and that many of the criteria researchers use to distinguish between them are unreliable (ibid). Littlemore (2015) notes that many researchers consider metonymy and metaphor to be part of a continuum, ranging from purely literal through metnonymy to metaphor (p. 116). She observes that "in principle, an expression can never be said to be metaphorical or metonymic in an absolute sense, but only for a given user in a given context" (ibid). This was the approach taken in this study, as Biernacka's (2013) procedure requires the researcher to compare each word's contextual meaning with its basic meaning. Moreover, in the current study, the issue of the distinction between metaphor and metonymy arose primarily in relation to personification, which will be discussed more below.

Next, in this study, lexical units were marked as "simile" if the metaphor related lexical unit was preceded by "like" or "as" since students practiced these specific grammar patterns for similes in class. This is similar to the MIPVU's procedure for identifying "direct metaphor," which is coded when lexical signals or "metaphor flags" are used to alert the addressee that cross-domain comparisons are coming. Using the MIPVU, researchers code "like," "as," "more," "less," and "more/less . . . than," as well as more substantial comparative and mental conception markers as metaphor flags (Steen et al., 2010a, pp. 40-41). However, this study focused only on traditional similes taught in class by coding phrases preceded by "as" and "like" as simile and coding lexical units with other flags as metaphor related words.

In addition, coding was added for personification, or a type of ontological metaphor in which human qualities or actions are attributed to nonhuman entities. Both Dorst (2011) and Dorst, Mulder, and Steen (2011) explain how personification can be identified using the MIP and

MIPVU in cases where "a non-human contextual meaning can be contrasted with, but also compared to, a human basic meaning" (p. 176). In this study, these lexical units were marked as "personification." While this definition seems straight-forward, it was sometimes difficult to distinguish between metonymy and personification in cases of the fourth type of personification in Dorst et al.'s (2011) typology: personification-with-metonymy. Low (1999) gives the example of "this essay thinks . . ." which can be analyzed as either metaphor or metonymy. If the writer starts with the noun phrase "this paper," and then adds the verb "thinks," the sentence can be analyzed as metaphorical using the personification AN ESSAY IS A PERSON. On the other hand, if the writer starts with the idea "I think," and then replaces "I" with "this essay" to make their writing style less 'subjective' or 'personal,' the sentence could be read as containing the metonymy PRODUCT FOR PRODUCER with "this essay" representing the author (Low, 1999, p. 223). Low (1999) notes that there is no principled way to establish whether the sentence represents metaphor or metonymy, and also that researchers and teachers do not gain anything by restricting their analysis of these types of sentences to only metaphor or metonymy (ibid).

Similarly, Dorst et al. (2011) give the examples, *Their eyes were searching the stacked containers* and *The CND office telephoned to ask her for voluntary evening help*. Although it is clear that it is people that are "searching" and "telephoning," these verbs require a human agent, which is technically missing from the sentence (p. 178). While Dorst et al. (2011) label this as "personification-with-metonymy," they do not give any guidelines as to how to mark the sentence using the MIP or MIPVU. For example, when asked to discuss whether museums should return stolen artwork to their country of origin, many students used PHYSICAL WHOLE FOR PART metonymies in sentences like "I think the *museum* should return the art." In this case, "museum" represents the museum's owner or administrative staff in charge of making decisions.

Since “museum” is undoubtedly a metonymy referring to people, it is not clear whether “return” should be coded as personification or not. In their study, Dorst et al. (2011) found that non-expert readers identified personification-with-metonymy as often as novel personifications, suggesting that “although a metonymic relation is also involved, the participants were still aware of the possibility of a personification interpretation” (p. 190). For this reason and following the procedure outlined here, in situations like the *museum* example, the metonymic subject was coded as metonymy and the verb was coded as personification. This is also in line with the way students learned in the classes, as the metonymy lessons included many examples where a country name or organization stood for the people living or working there and the subsequent verb was explained as personification.

Finally, since this study involved L2 learners, the category of “language error in metaphor” was added to code for cases in which a lexical unit marked as metaphor following the MIP/MIPVU was used incorrectly. These were most often miscollocations, such as erroneous prepositions used in phrasal verbs, but the category also included other types of incorrect vocabulary use that would have been marked as a metaphor related word using the MIP/MIPVU. Nacey (2013) raises the question of whether learner data should be coded for the intended word, the word produced, or discarded from analysis (pp. 119-120). Her approach was to analyze the lexical unit produced if it belonged to the standard English lexicon and discard the lexical unit if it formed no recognizable English word; the same approach was taken in this study. For example, “prevent” was marked as “language error in metaphor” when a student said “The government had to prevent the environment,” instead of “protect” the environment. Protect would have been coded as personification, but since “prevent” was used incorrectly in the sentence instead, it was marked as “language error in metaphor.”

The procedure for coding lexical units in this study is summarized in Table 9 below. Once a lexical unit was coded as potentially metaphorical, steps were taken to determine if it could be further classified as metonymy, personification, simile, or language error in metaphor. Lexical units that did not fit any of these other categories retained the coding "metaphor related word."

Table 9: Procedure for Further Classifying Lexical Units Coded Using MIPVU

1. Read the entire text to get a general understanding of the overall meaning.
2. Determine lexical units.
3. Following the MIPVU, mark lexical units as potentially metaphorical when the meaning in context differs from the basic meaning of the lexical unit.
4. If the relationship between the meaning of the lexical unit in context and its basic meaning is one of contiguity, such as using the whole to represent a part of something, a part to represent the whole, or some other category of metonymy, mark it as metonymy. Follow steps in Biernacka's (2013) procedure.
5. If the lexical unit applies an action or characteristic with a human basic meaning to a non-human topic, mark it as personification.
6. If the lexical unit is preceded by "like" or "as" to make a direct comparison, mark it as simile.
7. If the lexical unit is used incorrectly in English, such as due to L1 interference, miscollocation, or inserting an unnecessary word into a sentence, mark it as language error in metaphor.
8. All other cases should retain the label "metaphor related word."

To illustrate how the procedure works, here is an example sentence from the ESL experimental group's writing pre-test: "Further, the different of the rich and the poor are expanding like some areas doesn't have safe and clean water and some places still have hunger problem." Below is an explanation of how each step of the procedure was applied to this particular sentence.

Table 10: Application of Coding Procedure to ESL Experimental Group Writing Pre-Test Example Sentence

Step 1: Read the entire text to get a general understanding of the overall meaning.

Step 2: Determine lexical units.
In this sentence, each word is a separate lexical unit.

Step 3: Following the MIPVU, mark lexical units as potentially metaphorical when the meaning in context differs from the basic meaning of the lexical unit.
For this sentence, the following lexical units had a different meaning in context from the basic meaning of the lexical unit: **rich, poor, expanding, areas, have, place, have**

Step 4: If the relationship between the meaning of the lexical unit in context and its basic meaning is one of contiguity, such as using the whole to represent a part of something, a part to represent the whole, or some other category of metonymy, mark it as metonymy. Follow steps in Biernacka's (2013) procedure.

Rich:
3a: the contextual meaning is people who are wealthy
3b: the basic meaning is owning a lot of money, property, or valuable possessions
3c: relationship of contiguity? yes, (SALIENT PROPERTY OF CATEGORY FOR WHOLE CATEGORY)
4: do other lexical units belong together as part of the metonymy vehicle? Yes, "the" is part of the metonymy vehicle indicating the use of an adjective to represent a noun, mark "the rich" as metonymy

Poor:
3a: contextual meaning is people who are poor
3b: basic meaning is having little money and few possessions
3c: relationship of contiguity? = yes (SALIENT PROPERTY OF CATEGORY FOR WHOLE CATEGORY)
4: do other lexical units belong together as part of the metonymy vehicle? Yes, "the" is part of the metonymy vehicle indicating the use of an adjective to represent a noun, mark "the poor" as metonymy

Areas:
3a: contextual meaning is people who live in particular locations
3b: basic meaning is a part of a city, town, country, etc.
3c: relationship of contiguity? yes (PLACE FOR INHABITANTS)
4: do other lexical units belong together as part of the metonymy vehicle? No, mark "areas" as metonymy

Places:
3a: contextual meaning is people who live in particular locations
3b: basic meaning is a particular town, country, building, store, etc.
3c: relationship of contiguity? yes (PLACE FOR INHABITANTS)

4: do other lexical units belong together as part of the metonymy vehicle? No, mark "places" as metonymy

Step 5: If the lexical unit applies an action or characteristic with a human basic meaning to a non-human topic, mark it as personification.

Have:
MIP 3a. Contextual meaning is to own something (non-human contextual meaning)
MIP 3b. Basic meaning is to own something (human basic meaning)
MIP 3c. Does the contextual meaning contrast with the basic meaning but can be understood in comparison with it? Yes, the subject of the clause is non-human ("some areas") so mark "have" as personification

Have:
MIP 3a. Contextual meaning is to own something (non-human contextual meaning)
MIP 3b. Basic meaning is to own something (human basic meaning)
MIP 3c. Does the contextual meaning contrast with the basic meaning but can be understood in comparison with it? Yes, the subject of the clause is non-human ("some places") so mark "have" as personification

Step 6: If the lexical unit uses is preceded by "like" or "as" to make a direct comparison, mark it as simile.
There are no examples of similes in this sentence.

Step 7: If the lexical unit is used incorrectly in English, such as due to L1 interference, miscollocation, or inserting an unnecessary word into a sentence, mark it as language error in metaphor.
There are no examples of language error in metaphor in this sentence.

Step 8: All other cases should retain the label "metaphor related word."

Expanding:
MIP 3a: Contextual meaning is increasing (wealth gap)
MIP 3b: Basic meaning is to become larger in size and fill more space.
MIP 3c: Does the contextual meaning contrast with the basic meaning but can be understood in comparison with it? Yes, the physical meaning of becoming larger is applied to the non-physical meaning of an increasing wealth gap.
Mark "expanding" as a metaphor related word.

Following this procedure, the final analysis of this sentence is as follows: "Further, the different of **the rich** (metonymy) and **the poor** (metonymy) are **expanding** (metaphor related word) like some **areas** (metonymy) doesn't **have** (personification) safe and clean water and some **places** (metonymy) still **have** (personification) hunger problem." This example shows how the

procedure outlined here allowed for the coding of multiple categories of metaphor, metonymy, and language error in metaphor.

Other student examples for each additional category of metaphor and metonymy are shown in Table 11 below. Metonymy was mainly used to classify nouns in which the whole was used to represent a smaller part of something, like "China's trade" to represent all the businesses within China rather than the whole country, or nouns in which a small part or characteristic was used to represent a larger category, like monetary wealth to categorize people as in "the rich" and "the poor." Personification was coded when the inanimate subject of a clause was given human actions or characteristics, as in the examples the graph "show" or globalization "gives." Similes were coded when the words "like" or "as" were used to flag a figurative expression, as in the examples "sleeping like a baby," "like professional robbers," and "like the fire of hell." Finally, language error in metaphor was coded when lexical units coded with the MIP/MIPVU as metaphor related words were used incorrectly. Sometimes this was due to L1 interference, as in the example "have the same age," which was translated incorrectly from Spanish, sometimes these were miscollocations like "taking a solution," and sometimes these were mistakes in which metaphor was not required at all, as in the example "in order to save to the good things," in which the preposition "to" is not needed.

Table 11: Student Examples for Categories of Metonymy, Personification, Simile, and Language Error in Metaphor

Metaphor Categories	Student Examples
Metonymy	- The economists in the United States think that **China's** trade with **U.S** makes most of the Americans people better off. - Further, the different of the **rich** and the **poor** are expanding . . .
Personification	This graph **show** us the increasing of billion metric ton, tons of carbon dioxide in relation with time. If globalization **gives** them what they want, they consider it as a good and useful thing.
Simile	- In the morning when my mother was sleeping like **a baby.** - My sisters and I were like, uh, **professional robbers.** - It was uh, burned like **the fire of hell.**
Language Error in Metaphor	- You **have** the same age. - The countries like, **taking** a lot of solutions to, like to reduce the contamination of the, of the country. - In order to save **to** the good things . . .

Following the same procedure as Nacey (2013), a random sample of about 7% of all the students' writing and speaking samples from both the pre-test and post-test was coded by a second rater, and inter-rater reliability was calculated using the methods outlined in Steen et al. (2010a), as shown in the table below. Overall, the use of the MIP and MIPVU resulted in fairly consistent coding among the two raters, with 95% or higher agreement on the samples and a kappa of .724 or higher. However, when the coding was further classified into smaller categories of metaphorical language, the inter-rater reliability was not as high. This is likely due to two main factors. First, the second rater had a lot of experience using the traditional form of the MIP/MIPVU but not with breaking the metaphor related words down into smaller categories. In some cases, this resulted in disagreements between the coding of the primary researcher and that of the second rater. Secondly, the writing and speaking samples contained very few examples of some of the categories of metaphorical language, so when the two raters disagreed, the kappa value was disproportionately affected. For example, out of 3,968 total lexical units, the first rater identified 16 as metonymy, while the second rater identified just 2. Moreover, out of the two

lexical units the second rater identified, the first rater agreed with only one, so the kappa value was extremely low. Similarly, lower kappas were found to occur with personification and language error, which also occurred fairly rarely within the writing and speaking samples. In addition, no lexical units were coded as simile in the writing samples, meaning that there was no kappa value for this category. With more practice and a larger sample of each type of metaphorical language, the inter-rater reliability might have improved.

Table 12: Inter-Rater Reliability Using MIPVU

	Speaking Only	Writing Only	Combined Speaking/Writing
Percent of Words Coded the Same	97%	95%	96%
Kappa for All Figurative Language	.805	.724	.753
Metonymy Kappa	0	.132	.104
Personification Kappa	.362	.345	.351
Simile Kappa	.800	N/A – no words coded as simile	.800
Metaphor Related Words Kappa	.795	.718	.746
Language Error Kappa	.498	.396	.432

Table 13 below gives some specific examples of disagreements in coding between raters and shows how legitimate differences can arise between raters when coding metaphor. When there were disagreements between the two raters, the final coding was decided by following the procedure outlined above, by consulting the MEDAL, by having the two coders discuss disagreements together, and by further examining the context. For example, in the first writing excerpt, it was not clear from the context whether the writer was referring to a video or arcade game, in which case "go into" would be a language error, or a game like laser tag, in which case

it would be non-metaphorical. Although it was not clear from the context, the use of "me and all my friends," suggests a group game such as laser tag, so "go into" was coded as non-metaphorical. In the second excerpt, "take" was both an example of personification and language error, leading to the different coding. However, since the coding "language error in metaphor" already indicates that a lexical unit is being used metaphorically, this label was used instead of personification. Next, in the first speaking excerpt, the student was referring to a graph that the listener could physically see, so one rater coded it as non-metaphorical while the other rater coded it as figurative for the metaphor SEEING IS UNDERSTANDING. In this case, "see" was not coded as a metaphor related word since the meaning in context of physically seeing a graph matched the most basic meaning from the MEDAL of "to notice someone or something using your eyes." In the second excerpt, one rater considered "lose" to be a human action while the other did not. Consultation with the MEDAL showed that most of the subjects of the example sentences were indeed people, so the coding "personification" was used. Finally, in the third example, one rater considered "off" as a metaphor related word while the other considered it language error, with the appropriate expression considered to be "jumped (down)" or "dropped (down)." Again, consultation with the MEDAL showed that the dictionary definition of "jump off" is "to be or to become obvious or noticeable." In this case, the student was describing a drop in the graph, so "off" was coded as language error in metaphor. These examples show that even between metaphor researchers, reasonable disagreements about the metaphoricity of a word will arise; however, by consulting the MEDAL and further analyzing the context, it is possible to address most of these disagreements.

Table 13: Examples of Disagreements in Coding Between Raters

Writing Samples	Speaking Samples
1) "All my friends and me can **go into** a game." (Rater 1: non-figurative, Rater 2: language error in metaphor; final coding = non-figurative) 2) "it (globalization) not only **take** positive effects" (Rater 1: personification, Rater 2: language error; final coding = language error)	1) "you can **see** that recycling is increasing" (Rater 1: non-figurative, Rater 2: metaphor related word; final coding = non-figurative) 2) "this element can **lose** some property" (Rater 1: personification, Rater 2: metaphor related word; final coding = personification) 3) "and then it (the line in the graph) jumped **off** to like 40 percent" (Rater 1: language error in metaphor, Rater 2: metaphor related word; final coding = language error in metaphor)

Due to the focus of this research, the MIP and MIPVU were primarily viewed as methods for identifying metaphorical language for further qualitative analysis. Although widely accepted procedures for identifying metaphor, the MIP and MIPVU can be difficult to apply to real world situations due to differing opinions among raters and the detailed degree of analysis they require, as the examples above show. Moreover, although the MIP and MIPVU were used to identify metaphor density in the participants' videos and writing, further analysis is required to relate this figure to metaphoric competence. Metaphoric density simply refers to the percentage of metaphorically used lexical units identified by the MIP and MIPVU compared with the overall number of lexical units; it does not describe how well or accurately these lexical units are used. Metaphoric competence includes the ability to construct plausible meanings, knowledge of the boundaries of conventional metaphors, awareness of acceptable topic and vehicle combinations, ability to interpret and control hedges, awareness of 'socially sensitive' metaphors, awareness of 'multiple layering' in metaphors, and interactive awareness of metaphor (Lowe, 1988), none of which are identified by the MIP or MIPVU. Thus, further qualitative analysis is required to determine how the metaphor instruction affected students' metaphoric competence in their L2.

Effective use of metaphor varied by the type of writing or speaking task students were completing; therefore, how the classes may have affected students' metaphoric competence and metaphor use will be discussed with respect to each writing and speaking task in more detail in the results section.

2.7 Summary of methodology

This study investigated the effects of direct metaphor instruction in both an EFL and an ESL context using a pre-test and post-test format. The EFL participants were comprised of Spanish-speaking students from IKIAM University in Tena, Ecuador, while the ESL participants were comprised of a mixed group of students studying at Arizona State University in the United States. At the beginning and end of instruction, all students were tested on their ability to understand metaphor through reading comprehension tests, listening comprehension tests, and a quotation interpretation task, as well as their ability to appropriately use metaphor in writing and speaking samples. In addition, both the EFL and the ESL students completed class evaluation forms at the end of instruction, and the ESL students also completed a metaphor awareness pre-test and post-test.

Metaphor lessons in the four skill areas were informed by CMT, blending theory, and other cognitive linguistics research into best practices for teaching metaphor to L2 learners. The first class for all students included a definition of metaphorical language and an explicit introduction of CMT. Next, the three reading lessons focused on identifying and understanding metaphorical language in authentic reading passages, while the listening lessons focused on identifying and understanding metaphor in authentic listening passages. The writing classes required students to write creative metaphors, respond to quotations containing metaphor, and include descriptive metaphor in written narratives or written descriptions of graphs. Finally, the

speaking lessons taught students metaphorical expressions to use for a discussion task, a narrative task, and a graph description task. The control groups had classes covering the same topics without the focus on metaphor.

After instruction, the participants' pre-test and post-test reading and listening comprehension scores were compared, and the participants' pre-test and post-test writing samples, speaking samples, and quotation tasks were evaluated by two to three raters using the rubrics in the appendices of this dissertation. Next, the MIP and MIPVU were used to identify metaphor related words in the participants' writing, in their speaking tasks, in the summary/response articles, and in native speaker samples. Metaphor related words were further broken down into the categories of metonymy, personification, simile, and language error. Identifying and categorizing specific instances of metaphor in the writing and speaking samples allowed for more qualitative evaluation of the effects of the metaphor and metonymy instruction.

The research methodology outlined here allowed for assessment of the effects of classes explicitly teaching metaphor using both quantitative analysis, through ratings and scores, as well as qualitative analysis, through identification and evaluation of participants' quotation interpretation tasks and metaphor use. The current study aims to contribute to previous research by evaluating first how cognitive linguistics can inform methodologies for teaching metaphor and metonymy in the four skills areas and then evaluating the impact of this methodology on students' receptive and productive skills, their metaphor awareness and metaphoric competence, and their critical thinking abilities when interpreting and evaluating metaphor in their L2. Furthermore, because the research was carried out in both and EFL and an ESL context, it was possible to evaluate the effects of the teaching methods in two different settings.

3. Results

This two-part study aimed to test the effects of targeted metaphor instruction on students' abilities to understand, interpret, and use metaphorical expressions in their L2. I would like to begin this chapter with an overview of the main findings. In general, although students who took the metaphor classes did not improve on the reading and listening comprehension tests, they did show some improvement in identifying and interpreting metaphors. With regards to productive skills, students who took the metaphor classes showed some progress in overall frequency of some different types of metaphor on the post-test writing and speaking tasks. Finally, students who took the metaphor classes responded positively on end of course surveys, showing they valued the course. Moreover, these results held true regardless of whether students were studying in an EFL or an ESL context.

These results are further discussed in each of the sections below. The chapter is structured according to the research questions in the study. Each section begins with a summary of the main findings for that particular research question followed by detailed analysis of the effects of the metaphor instruction. The last part of the chapter goes into more qualitative and descriptive analysis of the students' metaphor use on the pre-test and post-test, as well as their attitudes towards the metaphor instruction as revealed on the end of course surveys.

3.1 How does explicit instruction in the use of metaphor affect students' receptive skills on passages containing metaphorical expressions?

Before the study, it was hypothesized that the metaphor instruction during the reading and listening lessons would help students develop both their metaphor awareness and their metaphoric competence by improving their ability to identify and understand metaphorical expressions in new reading and listening passages. To test this hypothesis, study participants

took a pre-test and post-test that targeted metaphor in authentic reading and listening passages. However, the overall results of the reading and listening comprehension tests do not appear to show a correlation between the metaphor instruction and improved reading and listening comprehension of passages containing metaphorical expressions.

First, the results of the reading comprehension tests are shown in Table 14 below. All of the students improved on the post-test except for the EFL experimental group; the median scores of the ESL control group improved by 5%, the median scores of the ESL experimental group improved by 10%, and the median scores of the EFL control group improved by 20%. However, when the scores on the reading comprehension pre-test and post-test for each group were compared in SPSS using the Wilcoxon signed-rank test, the only significant difference was found for the EFL control group with a p-value of .025 That is, while the other groups' scores showed some improvement, the only group to have significant improvement on the reading comprehension test was the EFL control group.

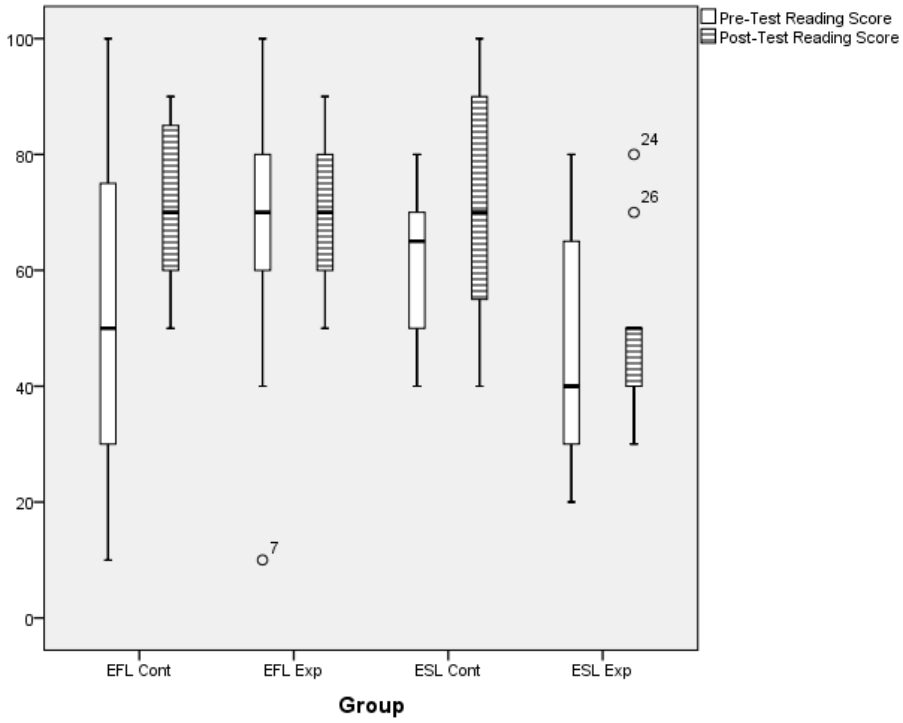
Table 14: Median and Mean Scores on Reading Comprehension Tests (= significant at p<.05)*

	EFL Control Group (n=10)	EFL Experimental Group (n = 11)	ESL Control Group (n = 12)	ESL Experimental Group (n = 11)
Pre-Test Median (Mean)	50% (54%)	70% (67%)	65% (63%)	40% (47%)
Post-Test Median (Mean)	70% (70%)	70% (72%)	70% (72%)	50% (49%)
Difference	+20%* (+16%)	+0% (+5%)	+5% (+9%)	+10% (+2%)

In addition, Figure 2 below shows a boxplot of the reading comprehension scores. In general, it can be seen that the scores varied quite a bit on both the pre-test and post-test, with most groups making slight improvement from the pre-test to the post-test. In addition, it can be

seen that the ESL experimental group's upper quartile and upper whisker are the same as the median score. About half of the class scored 50% on the post-test, with only one student scoring 70% and one scoring 80%, two of the outliers in the boxplot. The only other outlier is a student from the EFL experimental group who scored 10% on the pre-test.

Figure 2: Boxplot of Reading Comprehension Scores



Next, the results of the listening comprehension tests are shown in Table 15 below. The scores of the EFL experimental group and the ESL control group decreased from the pre-test to the post-test while only the scores of the ESL experimental group increased. In other words, on average, both the EFL experimental group and the ESL control group missed about one and a half more questions on the post-test than on the pre-test, while the ESL experimental group got one more question correct on the post-test than on the pre-test. When the pre-test and post-test scores for each group were compared in SPSS using the Wilcoxon signed-rank test, significant

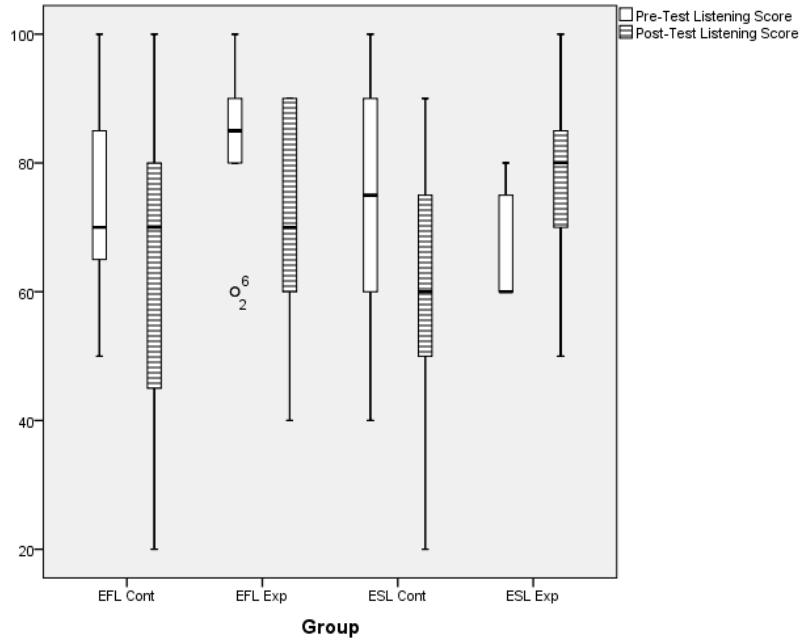
differences with p-values <.05 were found for the EFL experimental group, the ESL control group, and the ESL experimental group. In other words, both the EFL experimental group and the ESL control group's scores decreased significantly, while only the ESL experimental group's scores increased significantly. Differences in the EFL control group's median scores on the pre-test and post-test were not significant.

Table 15: Median and Mean Scores on Listening Comprehension Tests (= significant at p<.05)*

	EFL Control Group (n = 10)	EFL Experimental Group (n = 11)	ESL Control Group (n = 8)	ESL Experimental Group (n = 12)
Pre-Test Median (Average)	70% (74%)	85% (83%)	75% (74%)	70% (66%)
Post-Test Median (Average)	70% (62%)	70% (70%)	60% (60%)	80% (76%)
Difference Median (Average)	+0% (-12%)	-15%* (-13%)	-15%* (-14%)	+10%* (+10%)

In addition, Figure 3 below shows a boxplot of the listening comprehension scores. In general, it can be seen that the scores varied much more on the post-test than on the pre-test, and also that the scores generally decreased on the listening comprehension post-test, except for the ESL experimental group. In addition, it can be seen that the lower whisker, lower quartile, and median score for the ESL experimental group's pre-test are the same. This is because more than half the class received 60% on the pre-test. Although the tests were piloted with both a non-native English teacher and a student who was not participating in the study, this figure suggests that the listening comprehension post-test might have just generally been a little more difficult for the students than the pre-test.

Figure 3: Boxplot of Listening Comprehension Scores



As the tables and figures above show, the reading and listening comprehension test scores do not demonstrate a strong correlation between the metaphor instruction and improved reading and listening comprehension of passages with metaphorical expressions. In other words, students who took the metaphor classes were not more likely to improve on the post-test than students who had not taken the class. One reason for this finding could be the small sample size with only 8 to 12 students per group who took both tests and only ten questions per test. This means that if one or two students did either particularly poorly or particularly well on the pre-test or post-test, it could skew the results. In addition, there were only three metaphor lessons on each skill, which may not have been enough instruction to significantly improve students' receptive skills for metaphorical language. As metaphor can be difficult for L2 learners to understand due to linguistic, cognitive, and cultural factors (Boers et al., 2004; Charteris-Black, 2004; Falk, 2012; Kövecses, 2005; Littlemore and Low, 2006a; Trim, 2007), it is likely that students need more instruction, class time, and practice to see significant improvement comprehending authentic metaphors in reading and listening texts.

Another possibility is that the students may have had difficulty transferring the concepts and skills from the reading and listening lessons to the new reading and listening texts on the post-tests. While Picken (2005) found that metaphor-awareness activities improved his students' metaphor comprehension on reading tasks, his post-tests included passages with the same conceptual metaphors students had already studied. In contrast, the current study both taught and tested students with authentic academic reading and listening passages, so the metaphorical expressions of the passages students studied in class were different from those on the post-tests. It was hoped that students would transfer their metaphor analysis skills from the classes to the new metaphors on the post-tests; however, it appears that the participants were not able to successfully comprehend the new metaphors and may have needed more training than the three lessons they received. As research shows that metaphorical language in reading and listening passages can be difficult for English language learners to understand (Littlemore et al., 2011; Picken, 2007; Vanlancker-Sidtis, 2003), it would be useful to determine exactly why the participants in this study were unable to significantly improve their reading and listening comprehension scores, as well as what conditions and teaching methods might make this more likely.

3.2 What are the effects of explicit instruction in the use of metaphor on students' ability to understand and interpret metaphor in their L2?

Before the study, it was hypothesized that metaphor instruction would improve students' abilities to understand and interpret metaphorical expressions in English. To test this hypothesis, participants were given both a metaphor awareness test and a metaphor interpretation task at the beginning and end of the instruction. The results suggest that the metaphor instruction may have

helped improve students' metaphor awareness and metaphoric competence by helping them learn to identify and subsequently interpret metaphors more accurately.

3.2.1 Metaphor awareness test

As Littlemore et al. (2011) found, students might not even realize they have misinterpreted a metaphorical expression. This is particularly true if students are unaware that an expression is being used figuratively at all and instead try to interpret the expression literally. For this reason, a metaphor awareness test (see Appendix D) was added in the ESL context to determine whether the metaphor classes improved students' abilities to identify metaphorical expressions. Participants were asked to rate sentences from 1 to 5 with 1 meaning the entire sentence was literal and 5 meaning the sentence contained at least one metaphorical expression.

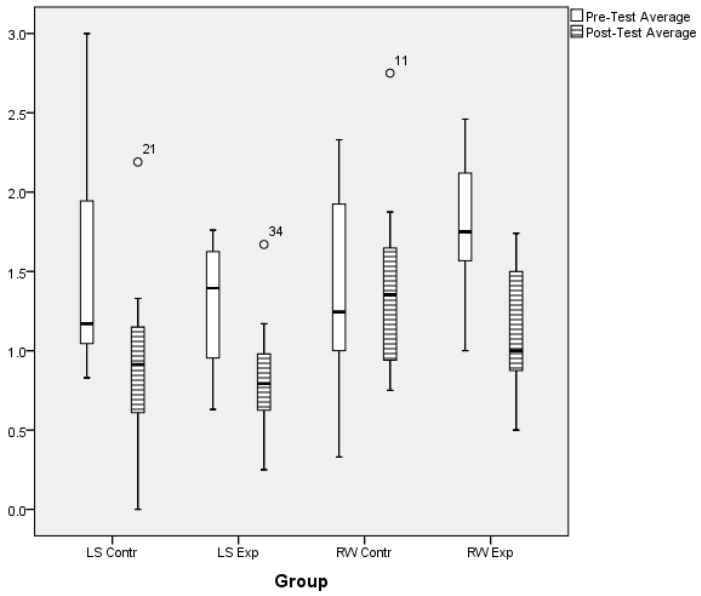
The results are shown in Table 16 below. The scores represent the difference between the students' rating and the actual metaphor rating of the sentences, so lower scores represent more accurate metaphor identification abilities. As the table shows, while all the groups improved on the post-test, the experimental groups improved more than the control groups. When the results of the pre-test and post-test for each group were compared in SPSS using the Wilcoxon signed-rank test, significant differences with p-values <.05 were found for the Listening/Speaking control group, the Listening/Speaking experimental group, and the Reading/Writing experimental group, as shown in the table. That is, the only group that did not show significant improvement was the Reading/Writing control group.

Table 16: Median and Mean Scores on Metaphor Awareness Test (= significant at p<.05)*

	ESL Control Group Listening/Speaking (n = 12)	ESL Control Group Reading/Writing (n = 12)	ESL Experimental Group Listening/Speaking (n = 12)	ESL Experimental Group Reading/Writing (n = 11)
Pre-Test Median (Mean)	1.17* (1.51)	1.25 (1.4)	1.4* (1.28)	1.75* (1.82)
Post-Test Median (Mean)	0.92* (0.92)	1.35 (1.39)	0.79* (0.83)	1.00* (1.12)
Difference (Mean)	- 0.25* (-0.59)	-0.1 (-0.01)	- 0.61* (-.45)	- 0.75* (-0.7)

Figure 4 below shows a boxplot of the scores on the metaphor awareness test. The lowest score was a 0, or a perfect score, and the highest score was a 3. While three of the groups showed significant improvement on the post-test, there are also some suspected outliers. In other words, for the listening/speaking control and experimental groups as well as for the reading/writing control group, there was one student who did much worse than other members of the class on the post-test. Further research might help determine why particular students in the same class might score so much lower on the post-test than their peers.

Figure 4: Boxplot of Metaphor Awareness Test Scores



The results of the metaphor awareness test suggest that the metaphor classes may have helped students identify metaphorically used words and expressions in their second language. However, since only the ESL students received the metaphor awareness tests, these results should be taken lightly. In addition, as the listening/speaking control group shows, it is also possible that students may develop these skills independently as students are exposed to more natural input and increase their overall vocabulary and language skills, particularly in an ESL environment. More research with a larger number of students could show whether instruction focusing on metaphor can really help students identify new instances of metaphorical language in their L2.

3.2.2 Metaphor interpretation task

It was also hypothesized that the metaphor classes might improve students' metaphoric competence by helping students learn to correctly and accurately interpret English metaphors. To test students' abilities to interpret metaphor in their L2, students were given a quotation task in which they had to choose one of six short quotations containing metaphor, write a paragraph identifying and explaining the metaphor, and then write another paragraph giving their own response to the quotation (see Appendix B and C). The students were given a score of 0 – 5 on their ability to identify and interpret the metaphor, as well as their ability to give their own opinion of the quotation (see Appendix F). The results are summarized in Tables 17 and 18 below.

As the tables show, while all the groups improved except the ESL reading/writing control group, the experimental groups improved more than the control groups. Wilcoxon signed rank tests were used to compare the pre-test and post-test scores for each group, and significant results at $p<.05$ are marked with an asterisk below. It can be seen that the ESL reading/writing

experimental group and the EFL experimental group improved significantly in all areas, the EFL control group improved significantly in some areas, the ESL listening/speaking groups did not improve significantly, and the ESL reading/writing control group decreased significantly in metaphor identification. In addition, when each experimental group was compared with its respective control group using the independent samples Mann-Whitney U test, only the ESL reading/writing groups were found to differ significantly from each other on the pre-test. In other words, the scores of the ESL reading/writing experimental group were significantly lower than all the scores of the ESL reading/writing control group on the pre-test, but not significantly different from each other on the post-test.

Table 17: Median Scores on Metaphor Quotation Task in EFL Groups (= significant at p<.05)*

	EFL Control Group (n = 9)		EFL Experimental Group (n = 9)	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Median Metaphor Identification	2.5 (2.1)	3 (2.9)	2.5* (2.1)	3.5* (3.4)
Median Metaphor Interpretation	2* (1.7)	3* (2.9)	2.5* (2.2)	3* (3.3)
Median Student Opinion	3* (2.8)	3.5* (3.5)	2.5* (2.3)	3.5* (3.7)
Median Overall Score	1.8* (2.2)	3.2* (3.1)	2.5* (2.2)	3.5* (3.4)
Difference Overall Score	+1.4* (+0.9)		+1.0* (+1.2)	

Table 18: Median and Mean Scores on Metaphor Quotation Task in ESL Groups (= significant at p<.05)*

	ESL RW Control Group (n = 12)		ESL LS Control Group (n=9)		ESL RW Experimental Group (n = 11)		ESL LS Experimental Group (n=12)	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Median Metaphor Identification (Mean)	2.75* (2.75)	2* (1.9)	3 (2.8)	2.5 (2.8)	1* (1.2)	1.5* (2)	2.25 (2)	2.75 (2.3)
Median Metaphor Interpretation (Mean)	2.75 (2.8)	2.5 (2.3)	3 (2.7)	2.5 (3.2)	1* (1.2)	2.5* (2.5)	2.5 (2.2)	3 (2.8)
Median Student Opinion (Mean)	2.75 (2.8)	2.5 (2.5)	3 (3)	3.5 (3.2)	1.75* (2)	2.5* (2.8)	2 (2.1)	2.9 (2.6)
Median Overall Score (Mean)	2.8 (2.8)	2.3 (2.3)	2.7 (2.8)	3 (3.1)	1.1* (1.4)	2.4* (2.4)	2.3 (2.1)	2.9 (2.6)
Difference Overall Score (Mean)	-0.5 (-0.5)		+0.3 (+0.3)		+1.3* (+1.0)		+0.6 (+0.5)	

Figure 5 below shows a boxplot of the EFL students' overall metaphor quotation task scores. It can be seen that the two groups had a large range of scores on the pre-test, particularly the EFL experimental group. However, on the post-test, there was a much smaller range of scores, with most students scoring between 3 and 4 points. In addition, both groups improved a fair amount on the post-test, with just a few outliers.

Figure 5: Boxplot of EFL Students' Overall Metaphor Quotation Task Scores

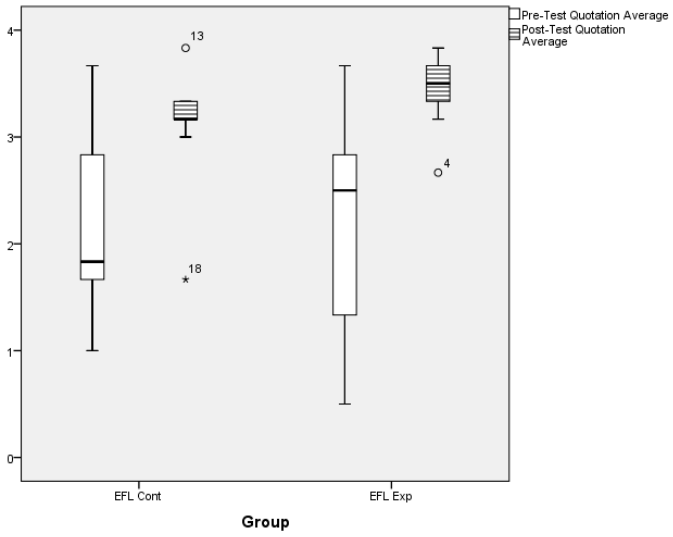
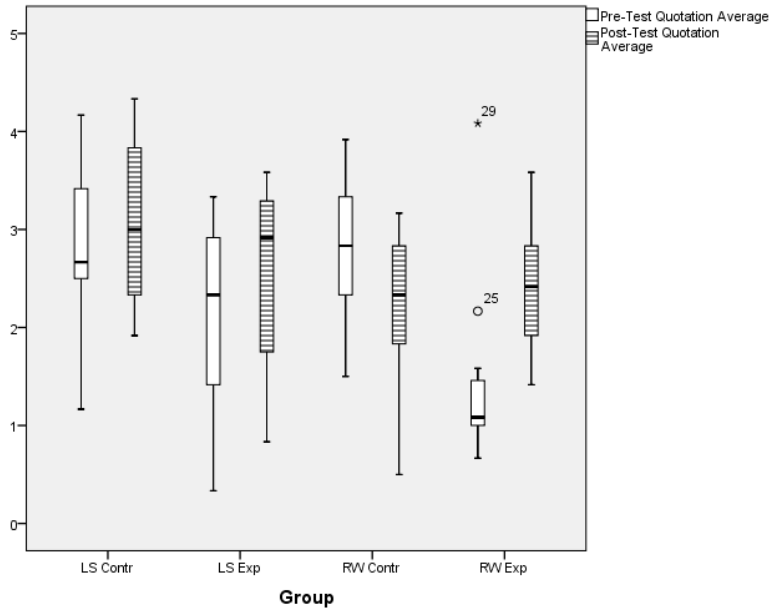


Figure 6 below shows a boxplot of the ESL students' metaphor quotation task scores. The ESL students' scores show a lot more variability than the EFL students' scores. In addition, it is obvious that the largest gains were made by the reading/writing experimental group while only the reading/writing control group's scores decreased. The only outliers were two students from the reading/writing experimental group who scored relatively high on the pre-test.

Figure 6: Boxplot of ESL Students' Overall Metaphor Quotation Task Scores



Overall, since two out of three experimental groups showed significant improvements, the results suggest that the metaphor classes may have helped students learn to interpret and respond to metaphorical expressions in their L2. However, neither the listening/speaking control group nor the listening/speaking experimental group improved significantly on the post-test. This might indicate that the instruction of the reading/writing classes was better for improving metaphor awareness and competence. Students in the reading/writing classes were asked to identify and explain new metaphorical expressions in reading passages while students in the listening/speaking classes were usually asked comprehension questions about specific

metaphorical phrases that had already been identified for them. Perhaps giving students transcripts of the listening passages and asking them to identify, interpret, and discuss new metaphorical language in the listening passages might have helped them improve more significantly on the metaphor quotation task.

Next, some common problems that appeared in the first paragraph of the students' quotation interpretation responses are shown in Table 19 below. First, instead of directly identifying and explaining the metaphor in the quotation, several students simply wrote about the general topic, as shown in the first example. Another common mistake was trying to apply a literal interpretation to metaphorical expressions, as shown in the second example. Several participants in both the control and experimental groups tried to interpret the quotation below literally to mean that pollution causes diseases for people rather than mapping characteristics of incurable diseases onto the problem of environmental pollution. Finally, participants occasionally misinterpreted the quotation in a way that was very different from the original meaning of the metaphorical language. For example, a few students interpreted the third quotation below to mean that the government should ignore the environment and only focus on the economy, the complete opposite meaning of the original quote. However, as these mistakes were more common for all groups of students on the pre-test than on the post-test, it is unlikely that the metaphor instruction alone affected the students' performance on the quotation task. It could be that the students improved simply due to general development in their English skills over the course of the semester or the session.

Table 19: Examples of Common Problems on the First Paragraph of the Quotation Interpretation Task

	Not Identifying Metaphor	Literal Interpretation	Wrong Interpretation
Quotation	"Water and air, the two essential fluids on which all life depends, have become global garbage cans."	"Environmental pollution is an incurable disease. It can only be prevented."	"We don't have to sacrifice a strong economy for a healthy environment."
Student Example	"In these days more and more people are distribute in the environmental pollution. Because they do not have that resposibility to preserve on their environment on the right way. They cut down the tree and factories through out their trash in the sea. Also, people can pollute their environment by their cars. Thus, they do not have motivation to keep the environment clean. Moreover, they do not follow their government's rules."	"Indeed, the author states that an environmental pollution is considered one of the most serious issues that affects negatively human life around the world. Wherefore, this issue may bring a lot of disease to people. Thus, an environmental pollution must be prevented through putting the policies that can protect the people in the future."	"The author means the environment needs a huge work and money to be healthy and government doesn't need to spend a lot of money on environment because that can affected economy in negative way. Author describes environment be healthy is like get A+ without hard study."

In the second paragraph giving their response to the quotation, participants had similar problems, especially if they had not explained the quotation correctly in the first paragraph. First, some participants wrote about the topic generally instead of responding directly to the quote, as shown in the first example in Table 20 below. Next, students who had interpreted the quotation literally in the first paragraph responded literally to the quotation in the second paragraph, as shown in the second example below. In this case, the student has interpreted the metaphor "incurable disease" literally, so mistakenly discusses medicine, health, and death in their response rather than discussing what makes pollution an "incurable disease." Finally, students who had misinterpreted the metaphorical expressions in the first paragraph also responded to this incorrect interpretation in the second paragraph, as shown in the last example below. In this case, the student has misinterpreted the metaphor and believes that he disagrees with the quote when he actually agrees with it.

Table 20: Student Examples of Common Problems on the Second Paragraph of the Quotation Interpretation Task

	Not Responding Directly to the Quotation	Responding to a Literal Interpretation of the Metaphor	Responding to a Misinterpretation of the Quotation
Quotation	"Nature provides a free lunch, but only if we control our appetites."	"Environmental pollution is an incurable disease. It can only be prevented."	"We don't have to sacrifice a strong economy for a healthy environment."
Student Examples	"I totally agree with the author in his words. Because when people starts to use the environment in the wrong way, its going to hurt the people eventually. People can't live without a good environment because the life of people depends on the environment itself."	"Environmental pollution it can kill people and animals, and woods. If people live in country it has a lot of pollution he will deid because the disease it hard to find the good medicine to feel good healthy. The government should find anything to stop this pollution and no one will be killed by pollution."	"Although economy is important for developing a country, our environment is more important than economy. If we keep destroying our environment for business, our future generation will be able to live on healthy environment. Therefore, we need to take action for protecting our environment immediately. Overall, I disagree with author's point."

In general, these examples show not only that students must first understand a metaphorical expression before they can respond to it, but also that students who either interpret a metaphorical expression literally or misinterpret its meaning will not be able to give an appropriate response. That is, raising students' metaphor awareness and helping them learn to identify metaphorical expressions will also help improve their metaphoric competence, or ability to understand and interpret metaphor. In addition, as with the first paragraph, the metaphor instruction did not have a clear impact on students' written responses as students from all groups improved on the post-test, perhaps since they both improved on the first paragraph and developed their general English skills during the course.

One positive impact of the metaphor instruction was that it made students more aware of metaphor in general. The experimental groups made more explicit references to metaphor on the post-test than on the pre-test while the control groups made fewer explicit references to metaphor on the post-test than the pre-test. In addition, several students in the experimental groups began

to evaluate the effects of the author's use of metaphor, as shown in the two examples below. These two students could not only identify the metaphor, but also explained that they like the metaphor because it was "strong" and gave the reader a "best picture." This shows that these two students not only developed their ability to understand metaphor but also critically evaluate how a writer is using them in their L2.

Table 21: Examples of Explicit References to Metaphor on the Quotation Interpretation Task from ESL Experimental Listening/Speaking Group

Quotation	"Forests are the lungs of our land."	"Nature provides a free lunch, but only if we control our appetites."
Student Example	The author use this metaphor for a stronger impact on the reader. Comparing forest with the lungs gives us best picture of what happening in the nature.	What I like about this quote is the metaphor that the author use. He defined nature as something that the human need in his life. In my opinion, the metaphor he used was strong enough to show people how nature is something we need to take care of, so it makes us alive.

To sum up, the metaphor instruction had a modest impact on student performance on the metaphor interpretation task. Statistically significant improvements from the pre-test to the post-test were found for the EFL experimental group as well as the ESL experimental reading/writing group, showing an improvement in the students' metaphoric competence, or ability to understand, interpret, and respond to metaphorical expressions, after the metaphor instruction. However, it was also noted that students in the listening/speaking experimental class did not improve significantly on the post-test metaphor quotation task, and it was suggested that giving students transcripts of the listening passages and asking them to find, interpret, and explain new metaphorical phrases on their own might have helped them improve more on the post-test quotation task. Next, participants in all groups showed a reduction in common mistakes on both paragraphs of the quotation interpretation task. Moreover, the common mistakes identified on the metaphor interpretation task may also suggest common issues teachers might address during targeted metaphor instruction.

3.3 How does explicit instruction in the use of metaphor and metonymy affect students' abilities to use metaphor and metonymy in written and spoken production?

During this study, students' productive skills in both writing and speaking were assessed on the pre-test and post-test. Overall, on the writing task, the experimental groups in both the EFL and ESL context showed an increase in the amount of metaphor as measured by the MIP/MIPVU used on the post-test compared with the pre-test while the control groups decreased in the amount of metaphor used on the post-test. In addition, the different writing tasks influenced the amount of metaphor students used, suggesting that having students write in response to authentic texts rich in appropriate, topic specific metaphor and idioms may be more effective for encouraging students to write with metaphor than more traditional, creative tasks like narratives. For speaking, students who had taken the metaphor classes were more likely to use metaphor to add descriptive details to narratives and to accurately describe trends in graphs. In addition, it was noted that more targeted vocabulary instruction for specific speech tasks was more effective at increasing students' metaphor use in spoken production than instruction geared towards more creative use of metaphorical language. The results of the metaphor instruction on students' written and spoken production will be discussed in more detail below.

3.3.1 Writing

Because this study was conducted during regular classes at two different universities, a different writing task was chosen for the EFL and ESL groups. For the EFL students, the study included two groups from two different program levels, with the upper level focusing more on academic writing. Consequently, a narrative task was chosen to compare the two levels since it was believed that a narrative task would encourage metaphor production without giving one group an advantage over the other. For the ESL students, the control group and experimental

group came from the same program level. Therefore, the writing samples were taken from the program's designated assessments, which consisted of reading a newspaper article and writing a one paragraph summary and a one paragraph response.

The EFL students' writing was graded using a rubric adapted from the TOEFL test, while the ESL students' writing was graded using the assigned rubric for the class curriculum (see Appendix G). As shown in Table 22 and Table 23 below, all the students' total median scores decreased on the post-test compared with the pre-test. However, when the pre-test and post-test scores were compared in SPSS using the Wilcoxon signed rank test, the only significant difference was found for the decreased scores of the ESL experimental group. In other words, the metaphor instruction did not result in statistically significant improvement in the students' overall writing abilities. As it takes time to develop writing skills, the participants in this study might have needed more classes in order to see more significant improvements in their writing scores, especially for the ESL students who only studied during an 8-week session.

Table 22: EFL Students' Median and Mean Scores on the Narrative Writing Task

	EFL Control Group (n = 11)		EFL Experimental Group (n = 11)	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Median Linguistic Range (Mean)	10.7 (10.5)	10 (9.8)	9.7 (9.1)	9.3 (9.3)
Median Task Achievement (Mean)	11.3 (11.3)	10.7 (10)	10.7 (9.8)	10 (10)
Median Organization and Cohesion (Mean)	10.7 (10.5)	10 (9.5)	9.3 (9.1)	9 (9)
Median Grammar (Mean)	8.3 (8.8)	8.3 (8.1)	7.7 (7.7)	7.7 (7.5)
Median Vocabulary (Mean)	9.3 (10)	9.3 (9.1)	9 (9)	8.3 (8.6)
Median Writing Total (Mean)	10.1 (10.2)	9.7 (9.3)	9.3 (8.9)	8.9 (8.9)
Median Difference in Total Score (Mean)	-0.4 (-0.9)		-0.4 (-0)	

Table 23: ESL Students' Median Scores on Summary/Response Writing Task (= significant at p<.05)*

ESL Reading/Writing Control Group (n = 12)		ESL Reading/Writing Experimental Group (n = 11)	
Pre-Test Median (Mean)	Post-Test Median (Mean)	Pre-Test Median (Mean)	Post-Test Median (Mean)
84% (83%)	80% (80%)	84%* (82%)	74%* (74%)
Difference = -4% (-3%)		Difference = -10%* (-8%)	

Figure 7 below shows a boxplot of the EFL students' scores on the narrative writing task. It can be seen that the range of scores on the post-test narrative writing task was smaller than the range of scores on the pre-test. At the same time, both the EFL control and EFL experimental group's scores decreased slightly, and there are a number of outliers, especially for the experimental group. This suggests that there was not a strong correlation between the metaphor instruction and improved writing scores on the post-test.

Figure 7: Boxplot of EFL Students' Scores on the Narrative Writing Task

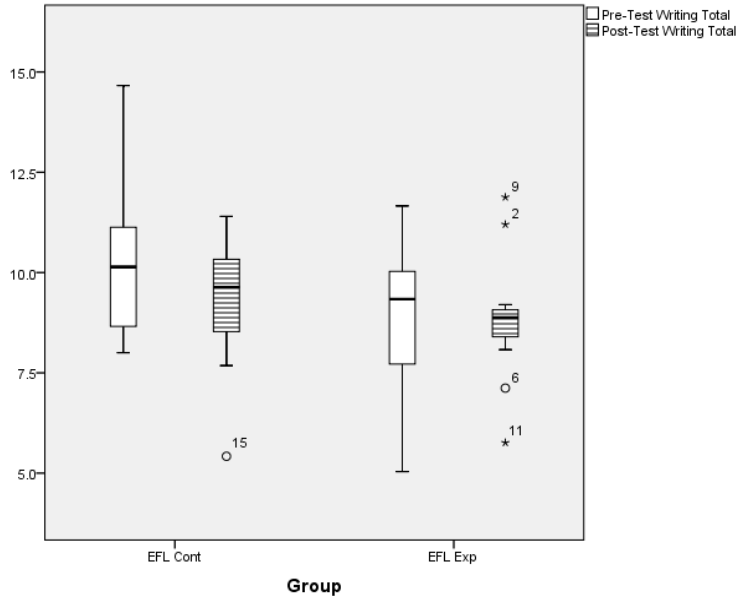
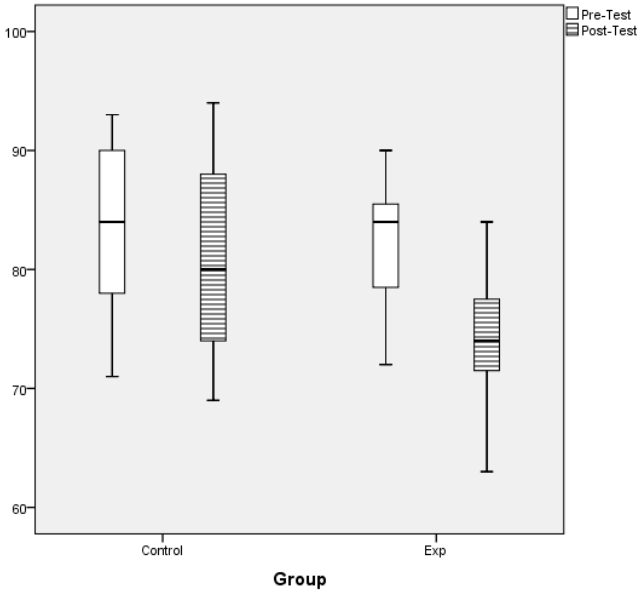


Figure 8 below shows a boxplot of the ESL students' scores on the summary/response task. The writing scores on the pre-test ranged from 71% to 93% while the scores on the post-test ranged from 63% to 94%. As with the boxplot of the EFL students above, both groups of ESL

students decreased on the writing post-test, suggesting that the metaphor instruction did not improve the students' overall writing abilities.

Figure 8: Boxplot of ESL Students' Scores on Summary/Response Writing Task



In addition, the writing samples were analyzed for overall metaphoric and metonymic language use as outlined in the methodology section. The results in Table 24 below show that only the experimental groups increased in overall metaphor frequency on the writing tasks, while the control groups decreased by 0.5 – 2.9%. When the pre-test and post-test frequencies were compared for each group using a Wilcoxon signed-rank test, significant differences were found for the decrease in other metaphor related words, total, and total without language error for the EFL control group, as well as the total increase for the ESL experimental group. In addition, when the EFL experimental group and the ESL experimental were compared with their respective control group using the independent samples Mann-Whitney U test, significant differences were found between the ESL groups' metonymy and personification use on both the pre-test and post-test as well as total and total without language error for the post-test. In other words, the ESL experimental group used significantly more metonymy and personification than

the control group on both tests as well as significantly more overall metaphor and metonymy on the post-test. This is likely due to the differences in their writing topics, which will be discussed more in section 3.3.3 below. There were no significant differences in metaphor and metonymy use between the EFL experimental and control group on either test.

Table 24: Median and Mean Metaphor Frequencies in Pre-Test and Post-Test Writing Samples (= significant differences at p<.05, mean in parenthesis)*

	EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 11)	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Median Metonymy (Mean)	0% (0.2%)	0% (0.3%)	0% (0.1%)	0% (0.2%)	0% (0.1%)	0.3% (0.4%)	0.8% (1%)	2.1% (2.8%)
Median Simile (Mean)	0% (0.1%)	0% (0%)	0% (0%)	0% (0.6%)	0% (0%)	0% (0%)	0% (0%)	0% (0.1%)
Median Personification (Mean)	0.6% (0.7%)	0.3% (0.5%)	0% (0.5%)	0% (0.4%)	1.1% (0.9%)	(0.7%) (0.8%)	2.2% (3.7%)	2.8% (3.4%)
Median Other Metaphor Related Words (Mean)	7.4%* (8.3%)	5.5%* (5.4%)	6.1% (6.1%)	7.7% (7.2%)	13.3% (12.6%)	11.7% (11.6%)	11.5% (11.2%)	12% (11.1%)
Median Language Error in Metaphor (Mean)	0.8% (0.7%)	0.9% (1%)	0% (0.6%)	0.7% (0.7%)	0.4% (0.6%)	0.4% (0.8%)	0% (0.4%)	0.8% (0.8%)
Median Total (Mean)	9.6%* (9.7%)	6.7%* (6.9%)	6.8% (7.2%)	10.5% (8.8%)	14% (14.2%)	13.1% (13.3%)	14.6%* (16.3%)	18.7%* (18.9%)
Median Total Without Language Error in Metaphor (Mean)	9%* (8.9%)	6.1%* (5.9%)	6.3% (6.6%)	8.9% (8.1%)	14% (13.5%)	12.3% (12.5%)	14.6% (15.9%)	18.1% (18.2%)
Median Total Difference (Mean)	-2.9%* (-2.8%)		+3.7% (+1.6%)		-0.9% (-0.9%)		+4.1%* (+2.6%)	
Median Total Difference Without Language Error in Metaphor (Mean)	-2.9%* (-3%)		+2.6% (+1.5%)		-1.7% (-1%)		+3.5% (+2.3)%	

Furthermore, the different writing tasks influenced the overall metaphor frequency of the EFL students compared with the ESL students, with both ESL groups using almost two times the amount of metaphor in their writing as the EFL groups. While the EFL groups' frequency ranged from 5.9% to 10.5% of the total writing sample, metaphor accounted for 12.3% to 18.9% of the ESL students' writing samples. Although most teachers would intuitively believe that more creative and expressive writing tasks like narratives would encourage students to produce more metaphor, the summary/response tasks actually resulted in more metaphor use. This is in line with research by Steen et al. (2010a, 2010b) which found that fiction writing contains less

overall metaphor than academic texts. As discussed in more detail below, this may also have been because the ESL students tended to use metaphorical expressions and idioms from the articles while the EFL students could only use metaphorical expressions they already knew when writing their narratives.

In addition to overall metaphor frequency, the four groups varied in their use of different types of metaphor. For example, only the EFL groups used similes in their writing. While neither EFL group used many similes on their pre-test, the experimental group did use some on the post-test. This may have been an effect of the metaphor classes, which encouraged students to use descriptive metaphors and similes when telling or writing a story. In addition, the ESL experimental group's writing samples demonstrated the highest use of metonymy. This is most likely due to the types of articles they read for their summary/response tests. The experimental group's articles were related to globalization and the economy, so those students tended to use country names to refer to that country's government or economy, copying the metonymy found in the articles they read. On the other hand, the ESL control group's articles were related to heroes and heroic actions, so the students did not include as much metonymy in their summary/responses. Similarly, the ESL experimental group used much more personification on both the pre-test and the post-test, most likely because the topics encouraged them to describe the actions of countries, economies, and globalization using personification.

Overall, while the metaphor classes did not increase students' overall writing scores, they may have had an impact on the nature of the metaphor students used. EFL students who took the metaphor classes subsequently used more descriptive similes in their narratives, and ESL students who took the metaphor classes were more likely to incorporate metonymy and other metaphorical expressions from the test articles into their summary/responses. The possible

effects of the metaphor classes in both the EFL context and the ESL context will each be discussed separately in greater depth in the following sections.

3.3.2 EFL writing task: narratives

For their writing task, the EFL students could choose to either write a story about a time they learned a lesson or an anecdote explaining a scientific principle. As mentioned in the previous section, since the EFL students came from two different program levels, the narrative topics were chosen to avoid giving an advantage to one class over another, as well as to provide a creative topic that might inspire metaphorical language use. Since the EFL students were attending a science university, the second topic of explaining a scientific principle through an anecdote seemed appropriate and applicable for all students, regardless of program level.

Overall, as shown in Table 24 above, the EFL experimental group increased in metaphor and metonymy use while the EFL control group's metaphor and metonymy frequency decreased from the pre-test to the post-test. Furthermore, the EFL control group's decrease in other metaphor related words, total, and total without language error were found to be statistically significant at $p<.05$. In addition to overall metaphor frequency, students in both groups used metaphor creatively on the pre-test and post-test, as the examples in Table 25 below show. Creative and effective use of metaphor often utilized conventional metaphorical expressions and English conceptual metaphors, as in the example "history took a different way," which expresses the conceptual metaphor LIFE IS A JOURNEY (Kövecses, 2010; Lakoff and Johnson, 1980) or the example "we were fighting for a place in a team," which expresses the conceptual metaphor SPORT IS WAR (Kövecses, 2010, p. 85). The examples also show commonly used linguistic metaphors and phrases, such as a "relationship with Nature," and "eliminate the walls between professionals." Less conventional uses tended to be less effective, as in the example "discontinue

mind or limited mind," which shows that the writer does not know the common phrase "narrow-minded" or "small-minded." A more effective example is "It's better a donkey wake up than a genius sleep." The student uses this metaphor when she explains how she would do her homework and study at night, but then be too tired to wake up on time and attend English class in the morning, which caused her to fail the class. As donkeys represent stupidity in both Spanish and English, this particular creative metaphor translates well in English.

Table 25: Examples of Creative Metaphor in EFL Writing Samples

	EFL Control Group	EFL Experimental Group
Pre-Test	- In the life the happiness feed the spirit of people - It's import to eliminate the walls between professionals - The history took a different way when I decided coming to study in IKIAM	- I believed that I was super good but when I trained I was a nature disaster - I ate, slept, breath volleyball - we have the obligation of live in harmony with the environment
Post-Test	- relationship with Nature - the director of the conference destroy all my expectations - people have discontinue mind or limited mind	- It's better a donkey wake up than a genious sleep - we were fighting for a place in a team and this made a conflict

Despite these examples, most of the metaphorical language appeared in the form of common phrasal verbs, prepositions, and other collocations. This is in line with Nacey's (2013) research, which showed that novel metaphor represented only 3-5% of total metaphors in both native and non-native writers' texts (p. 242). In other words, Nacey (2013) found that writers are more likely to uphold English norms than either transfer figurative expressions from their L1 or deliberately create novel metaphors. As the EFL students' metaphor frequency ranged from just 5.9% to 10.5% with few similes or examples of personification, very little of the metaphor used on the narrative task could be considered truly novel or creative.

Only one student from the experimental group used an extended metaphor in his narrative, as shown in the example below. The student writes about each person being a unique "piece" of a group that is difficult to "join" together and compares this to the parts of the human

body. Although this example may not be a particularly refined use of extended metaphor, it is possible that the metaphor classes encouraged him to attempt to write more extensive metaphors in English. Indeed, as Kathpalia and Carmel (2011) found that around 23% of the L2 students' texts they examined contained absolutely no metaphors for textual coherence at all, they conclude that students who attempt to use metaphor for textual coherence but fail are showing an interim period of language proficiency (p. 284). In other words, by attempting to add extended metaphor to his narrative, this student is showing that he is making progress in his metaphoric competence and should perhaps be encouraged to further develop these skills.

Table 26: EFL Post-Test Student Example: Extended Metaphor

This last months I learned that being with people that accept you with all your problems, are the most valuable thing that someone could have. In my point of view there is some kinds of people, and each one can be a central piece of a group. It is like the body, It has different organs with different functions, when you join all of them you create a human. This days is difficult join the pieces for a group because there are a lot of religions or ways of think that could broke a relationship, but it's really stupid because it damages us.

While the examples above demonstrate appropriate use of metaphorical expressions, the participants did not always use metaphor well, even on the post-test. This was especially true for idiomatic expressions. For example, the control groups' post-test narratives included the expression "kick on their face," instead of "kick in the face" while the experimental groups' narratives included the expressions "walk for their way" instead of "go their separate ways," "have a big smile from earn to earn" instead of "have a big smile from ear to ear," and "raining dogs and cats" instead of "raining cats and dogs." Kathpalia and Carmel (2011) note how the fixedness of idiomatic expressions poses additional challenges for learners since even a small change to the original phrasing results in miscollocations. Indeed, they found that 22% of miscollocations in the L2 student writing they examined could be attributed to mistakes with

idiomatic phrases (p. 281). Similarly, this study also showed that students struggle to use idiomatic expressions correctly in their L2. Indeed, words coded as "language error in metaphor" made up to 15% of the total metaphor in student writing. These were mostly miscollocations, especially in terms of misused prepositions and verbs, but there were also instances of L1 transfer. For example, one student wrote, "when you *have* any age," instead of "when you *are* at a certain age," while several students used the word "form" instead of "way" when talking about how to do something. Taken together, these results suggest that students may need more guidance with both metaphor in general and idioms and collocations in particular to improve their metaphoric competence.

Overall, the results of the study suggest that the metaphor classes may help EFL students incorporate appropriate metaphorical expressions into their writing; however, the results also indicate that teachers should not expect dramatic results from a few writing classes. Despite direct instruction of creative metaphors and similes, most students did not add many novel metaphors to their writing on the post-test. Moreover, the students' writing showed a number of language mistakes in metaphorical expressions, particularly with conventional idioms and metaphors as well as miscollocations. As it takes time to develop writing skills, the results of the study suggest students may need more class instruction to develop their metaphoric competence in writing.

3.3.3 ESL writing task: summary/responses

For their writing task, the ESL students had to read a New York Times article and complete a one-paragraph summary and a one-paragraph response. The chosen articles and tests were part of the curriculum that all Advanced 2 students in the Intensive English program were required to take and revolved around the themes they were studying. The metaphor frequencies

of the ESL students' pre-test and post-test writing samples are shown in Table 27 below. Overall, the experimental students used about the same amount of metaphor on the pre-test and post-test, while the control group's metaphor use decreased somewhat on the post-test. When the pre-test and post-test metaphor frequencies for each group were compared using Wilcoxon signed-rank tests, the only statistically significant result was the increase in total metaphor and metonymy use for the experimental group. In addition, as mentioned above, compared with the control group, the ESL experimental group was found to use significantly more metonymy and personification on both tests as well as more total metaphor and metonymy on the post-test. This is most likely due to the different articles chosen for each group as the control group's topic was heroes and the experimental group's topic was globalization.

Table 27: Median Metaphor Frequency in ESL Students' Pre-Test and Post-Test Writing Samples (= significant differences at p<.05, means in parentheses)*

	ESL Control Group (n = 12)		ESL Experimental Group (n = 11)	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Median Metonymy (Mean)	0% (0.1%)	0.3% (0.4%)	0.8% (1%)	2.1% (2.8%)
Median Simile (Mean)	0% (0%)	0% (0%)	0% (0%)	0% (0.2%)
Median Personification (Mean)	1.1% (0.9%)	(0.7%) (0.8%)	2.2% (3.7%)	2.8% (3.4%)
Median Other Metaphor Related Words (Mean)	13.3% (12.6%)	11.7% (11.6%)	11.5% (11.2%)	12% (11.1%)
Median Language Error in Metaphor (Mean)	0.4% (0.6%)	0.4% (0.8%)	0% (0.4%)	0.8% (0.8%)
Median Total (Mean)	14% (14.2%)	13.3% (13.1%)	14.6%* (16.3%)	18.7%* (18.9%)
Median Total Without Language Error in Metaphor (Mean)	14% (13.5%)	12.3% (12.5%)	14.6% (15.9%)	18.1% (18.2%)
Median Total Difference (Mean)	-0.7% (-0.9%)		+4.1%* (+2.6%)	
Median Total Difference Without Language Error in Metaphor (Mean)	-1.7% (-1%)		+3.5% (+3.3)%	

Table 28 shows the metaphor frequency of each test article, which ranged from 9% to 17.6%. The frequency of metaphor was lowest on the control group's post-test article and highest on the experimental group's post-test article, which could be another reason the experimental

group used more metaphor on their post-test writing than the control group. In addition, the experimental group's articles included the most metonymy, and the experimental group used the most metonymy in their writing. This is most likely due to the topic as the subject of the articles for the experimental group was globalization, which seemed to encourage more use of metonymy, as discussed in more detail below. The wide range of metaphor and metonymy frequencies on the test articles reflects the realities of conducting research within already established educational programs. While it would have been better for this study if articles on the same topic with similar metaphor and metonymy frequencies had been chosen for the pre-test and post-test writing samples, the academic program contained standardized curriculum and tests which needed to be used for all classes.

Table 28: Metaphor and Metonymy Frequency on Pre-Test and Post-Test Articles

	ESL RW Control Group (n = 12)		ESL RW Experimental Group (n = 11)	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Metonymy	0.7%	0.5%	2.9%	2.1%
Personification	1.7%	1%	2.1%	2.4%
Other Metaphor Related Words	12.4%	7.5%	10.7%	13.1%
Total	14.8%	9%	15.7%	17.6%

To further determine how the metaphor and metonymy that the students read in the test articles might have affected the metaphor the students used in their writing, metaphorical and metonymic expressions were first isolated from the article. These included collocational phrases, metonymy, personification, and other metaphorical expressions, but isolated prepositions were excluded from this search. As Deignan (2005) notes, prepositions are "relatively empty of semantic content," making their metaphoricity less salient for learners (p. 50). In addition, since prepositions have a number of uses in different contexts, it would be difficult to conclude that participants had picked up metaphorical uses of prepositions from the newspaper articles. Next,

metaphor and metonymy from the articles was compared with the metaphorical and metonymic expressions students used in their summary/responses, as shown in Table 29 below. Overall, around 13% – 21% of the metaphor and metonymy students used in their summary/responses was also found in the test articles. This suggests that students were likely taking metaphorical and metonymic expressions from the article to use in their own writing. Moreover, metaphor and metonymy from the newspaper articles accounts for a greater percent of the metaphor and metonymy used by the experimental group than by the control group. The focus on metaphor and metonymy in class may have made these words more salient to the ESL students and thus made them more likely to use them. It is also possible, however, that they simply used more of the metaphorical and metonymic expressions than the control groups on the post-test because their article contained more metaphorical and metonymic language overall, as shown in Table 28 above. Finally, the ESL students' tendency to borrow metaphorical and metonymic language from the articles for their own writing may partially explain why the ESL students used so much more metaphor and metonymy in their writing than the EFL students, who were not given an original article to read and instead were required to write narratives using expressions they already knew. However, it should be noted that the amount of metaphor and metonymy was also affected by the topic and writing task type. In other words, writing effective narratives generally requires less metaphor and metonymy than discussing political issues like globalization.

Table 29: Amount of Metaphorical Language from the Articles that Appeared in ESL Student Writing Samples

	ESL Control Group (n = 12)		ESL Experimental Group (n = 11)	
	Pre-test	Post-test	Pre-test	Post-test
Metaphorical Language Taken from the Article	1.8%	1.7%	3.5%	3.7%
Percent of Total Metaphorical Language Used	12.7%	13%	21.5%	19.6%

Next, Table 30 below shows some examples of metaphorical and metonymic expressions from the pre-test and post-test news articles that also appeared in the student writing samples. Although both groups of students picked up collocational phrases from the articles, the experimental group students used more subject specific phrases, such as "open/free markets," and "consumer appetite," as well as the metonymic uses of "the poor and the rich," and "the United States." In addition, the experimental group of students was much more likely to use metonymy from the articles in their writing samples, in particular the use of place names to represent governments, people, or companies located there. However, it should be noted that the control group's articles did not include as much metonymy and were also on a broader topic, so this might have made it less likely for them to include subject specific metaphorical and metonymic phrases.

Table 30: Examples of Metaphorical and Metonymic Language from Test Articles Used in ESL Writing Samples

		ESL Control Group (n = 12)		ESL Experimental Group (n = 11)	
Pre-Test	Metonymy	- us		- the poor and the rich - Western Europe - countries	- world - China - India
	Metaphor	- step up - shed light on - have a sense of	- turn out - blast through - frame	- see - find - consumer appetite	- open up (markets) -rising/expanding
Post-Test	Metonymy	- us - studies - research	- hand - volunteer (verb)	- the United States/ America/Americans - China - British/Brexit - nations	- minds - the world - generation - college graduates
	Metaphor	- find (joy) in - research (finds) - day-saver - reflect	- fade away - show off - embrace	- open/free (markets) - embrace (a move away from) - approach	- look beyond - in light of - view/ worldview/viewpoint

In addition to using metaphor and metonymy from the article, the experimental group of students also used a number of metonymic expression in their summary/responses that were not included in the article. The most frequent example is the metonymic use of "country/countries," which students in the experimental group used 8 times on the pre-test and 27 times on the post-test despite the fact that neither the pre-test nor the post-test article used this word at all. The article did, however, mention "nations," so it appears that the students were using "country" as a kind of metonymic synonym for "nation."

Other new uses of metonymy that appeared on the experimental group's post-test writing samples include "McDonald's," "KFC," "restaurant," "business," and "company," which all appeared in the second paragraph giving the students' response to the article shown in the example below. McDonald's is used to represent the people that own the company, the people that work there, and the fast food restaurants themselves when the student writes, "*McDonald*'s came into my country," as well as the product when the student writes, "(my brother) really likes to eat fast food, especially *McDonald*'s and *KFC*." More generally, the student is using McDonald's as a metonymic example to represent the negative effects of globalization and the spread of Western culture. This is in contrast to her metonymic use of *local businesses* and *restaurants*, which symbolize more traditional aspects of Chinese culture in addition to representing the owners and people who work there. Thus, the student's use of metonymy helps her express concerns over the negative impacts of globalization, as metonymically represented through Western fast food chains like McDonald's, on traditional Chinese culture and way of life, as metonymically represented by local businesses and restaurants. In other words, metonymy allows the student to communicate complex ideas about abstract topics when giving her response to the article.

Table 31: ESL Student Response Paragraph Example

According to Mankiw (2016), in his article, mentions that "why people think that globalization is bad for the economy in the first place". Mankiw's point is that nowadays some people think that globalization bring many negative influences to their own countries or local culture, so it is really harmful and bad for their economy, so these people disprove the views from the economists because they don't believe they can gain the profit and benefits from globalization. In my experience, when *McDonald's* came into my own country, and it was really influence the local economy. Take my younger brother as an example, he really like eats fast food, especially *McDonald's* and *KFC*. He spent all his pocket money to buy those fast food, and he didn't want to go to other local restaurants. Not only my younger brother is willing to go to *McDonald's*, but also all kids who living in the cities of China like these fast food so that *McDonald's* and *other fast food restaurants* can gain a large number of money and income. Due to *McDonald* is other country's brand which is not belong to local economy, people may think that it take some negative influences to local economy because many *local businesses* and *restaurants* are gain less and less incomes. With the development of the globalization, it not only affects local rating habits but also effects the tradition commences and our *life*. Thus, local businessmen think they cannot earn a lot of money and many people lose many profits and jobs because of globalization, that's why some people double the economist's opinion that gains from trade.

Despite using the expressions in Table 30 from the test articles in their written responses, the students did not use other more opaque idiomatic or cultural expressions from the articles. For example, no one in the control group used the phrases "stick your neck out," "tackle," or "thirst for attention," nor did anyone in the experimental group use "Gold Standard," "short end of the stick," or "in the long/short run." While understanding and using idioms are an important part of learning a language, research shows that not only can idioms be especially difficult for learners due to cross-cultural issues (Boers et al., 2004; Littlemore & Low, 2006a), they are seldom repeated throughout an academic passage, making it difficult for students to understand the meanings of idioms from their non-recurrent "one-off" uses (Low et al, 2008; Simpson & Mendis, 2003). Indeed, if students were not already familiar with their meanings, the examples given above would be difficult for students to use, meaning teachers may need to focus more on

cultural expressions and opaque idioms for students to be able to understand them in reading passages and correctly use them in their written production.

In general, the experimental group both used more metaphorical and metonymic language overall and took more metaphorical and metonymic language from the newspaper articles than the control group; however, this could be influenced by the choice of article. Because the research was conducted over two different class sessions, the assessments and curriculum theme changed, meaning the articles used on the pre-test and post-test consisted of different topics with differing amounts of metaphorical and metonymic language. Still, the metaphor classes may have helped students to both use appropriate metaphorical and metonymic expressions in their writing and learn to extract subject-specific metaphorical and metonymic phrases from authentic texts.

3.3.4. Speaking

To determine the effects of the metaphor instruction on students' spoken production, study participants made both a pre-test and post-test video sample. The videos were then rated by independent raters using an IELTS and a task-based rubric (see Appendix H), as well as analyzed for metaphor use with the MIP/MIPVU. The EFL students' video ratings are shown in Table 32 while the ESL students' video ratings are shown in Table 33 below. Overall, it can be seen that all groups had relatively similar IELTS and task scores, and that both EFL groups improved slightly on the post-test video ratings while the ESL groups decreased slightly on the post-test video ratings. The pre-test and post-test scores for each group were compared using the Wilcoxon signed-rank test, and the significant results are marked with an asterisk. It can be seen that the EFL control group had the most significant results, followed by the EFL experimental group. In contrast, none of the differences in scores for either ESL group were found to be

statistically significant. Just like the writing scores, since it takes time to improve overall speaking abilities, the participants in this study might have needed more classes in order to see more significant improvements in their speaking abilities.

Table 32: EFL Students' Median Video Ratings (= significant difference at p<.05)*

		EFL Control Group (n=10)		EFL Experimental Group (n=11)	
		Pre-Test	Post-Test	Pre-Test	Post-Test
Task Scores	Discussion Task Median	2.8	3	3	3
	Narrative Task Median	2.8	3	2.8	2.8
	Graph Task Median	2.7*	3.2*	3	3
	Total Task Median	2.7*	3.1*	2.9*	3*
IELTS Scores	Fluency and Coherence Median	6.2*	6.3*	6.2	6.3
	Lexical Resource Median	6.2*	6.5*	6*	6.3*
	Grammatical Range and Accuracy Median	6	6	5.8	5.8
	Pronunciation Median	5.8	6.2	5.8	5.8
	Overall IELTS Score Median	6*	6.2*	5.9	6.2
Difference	Overall Task Score Median	+0.4*		+0.1*	
	Overall IELTS Score Median	+0.2*		+0.3	

Table 33: ESL Students' Median Video Ratings (= significant difference at p<.05)*

		ESL Control Group (n = 10)		ESL Experimental Group (n = 11)	
		Pre-Test	Post-Test	Pre-Test	Post-Test
Task Scores	Discussion Task Median	3	3	2.75	2.9
	Narrative Task Median	3	3	2.6	2.9
	Graph Task Median	2.75	2.75	2.75	2.8
	Total Task Median	2.9	2.9	2.8	2.8
IELTS Scores	Fluency and Coherence Median	6.6	6.75	6.1	6.1
	Lexical Resource Median	6.4	6.1	6	6
	Grammatical Range and Accuracy Median	6.6	6.5	6	5.9
	Pronunciation Median	6.75	6.75	6.25	6.25
	Overall IELTS Score Median	6.6	6.4	6.1	6
Difference	Overall Task Score Median	+0		+0	
	Overall IELTS Score Median	-0.2		-0.1	

Figure 9 below shows a boxplot of the pre-test and post-test task scores, while Figure 10 shows a boxplot of the pre-test and post-test IELTS scores. It can be seen from Figure 9 that the

EFL students generally improved on the post-test task score, while the ESL students did not. There are also several outliers, for example a student who scored particularly high and one who scored particularly low on the EFL experimental group's post-test. Figure 10 shows similar results, with both EFL groups improving on the post-test and both ESL groups decreasing. In addition, the EFL students also generally had a smaller range of scores on both tests, while the ESL groups appear to encompass a larger range of proficiency levels. Still, the overall level of all the students seems to be very similar, with all groups scoring a median near a 3 on the speaking task rubric and around a 6 on the IELTS scale.

Figure 9: Boxplot of Pre-Test and Post-Test Task Scores for EFL and ESL Students

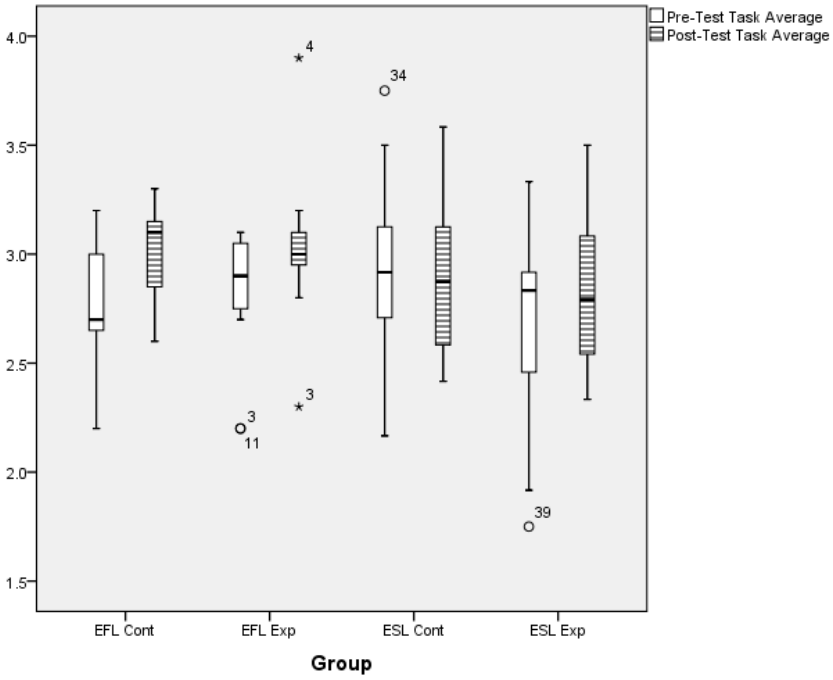
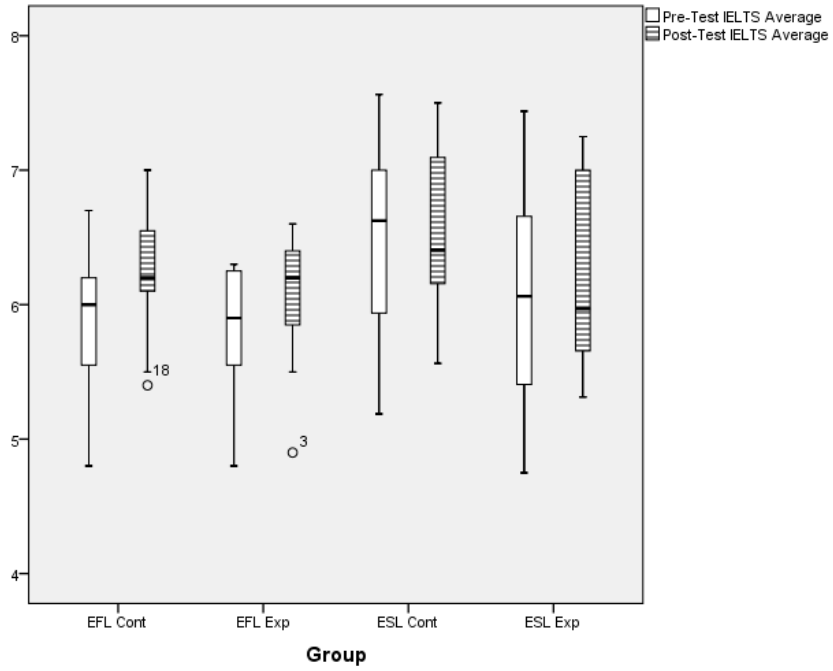


Figure 10: Boxplot of Pre-Test and Post-Test IELTS Scores for EFL and ESL Students



Next, the overall metaphor and metonymy use is shown in Table 34 below. The participants used the greatest amount of metaphor and metonymy on the graph description task, followed by the discussion task and then the narrative task. These results are in line with Steen et al.'s (2010a, 2010b) research, which showed that academic discourse contains more metaphorically related words (MRWs) than both fiction and conversation, as shown in Table 35 below. When the pre-test and post-test metaphor and metonymy frequency for each group on each task was compared using a Wilcoxon signed-rank test, only the ESL control group showed significant results on the discussion task. In other words, only the ESL control group showed a significant decrease in metaphor use for the discussion task, while none of the other groups showed a significant increase or decrease in overall metaphor and metonymy use for any of the speaking tasks on the post-test compared to the pre-test. In addition, samples of native speakers completing the tasks were also taken and analyzed, shown in Table 36 below. The results were the same, with the graph task encouraging the most metaphor, followed by the discussion task

and then the narrative task. It can also be seen that the native speakers used more metaphor and metonymy on the discussion task than any of the EFL or ESL groups, used more metaphor and metonymy on the graph description task than the EFL groups and the ESL control group, and used more metaphor and metonymy on the narrative task than some of the EFL and ESL groups. In other words, to approach the same frequency as the native speakers, the students would need to use more metaphor and metonymy on the discussion and graph description tasks in particular.

*Table 34: Median Metaphor and Metonymy Use as measured by the MIPVU on Video Tasks (percent not including language errors in metaphor in parenthesis, * = significant at p<.05)*

	EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 12)	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Discussion	8.8% (7.5%)	9.1% (9.1%)	7.8% (7.7%)	8.9% (8.1%)	9.5%* (9.6%)	5.3%* (5.9%)	10.4% (11.3%)	8.0% (8.8%)
Story	4.4% (4.2%)	3.6% (2.8%)	3.2% (2.3%)	5.9% (3.2%)	4.3% (4.4%)	3.2% (3.9%)	5.4% (5.7%)	5.7% (6.3%)
Graph	11.3% (10.2%)	10.8% (10.4%)	11.0% (10.7%)	12.2% (12.2%)	13.4% (14.6%)	13.2% (12.6%)	17.6% (19.3%)	20.2% (18.5%)

Table 35: Metaphor Frequency in English Discourse, Steen et al. (2010a, p. 195)

	Academic Discourse	Fiction	Conversation	News
Metaphorically Related Words (including WDLII)	18.5%	11.7%	7.6%	16.6%

Table 36: Metaphor and Metonymy Use as Measured by the MIPVU in Native Speaker Samples

	Discussion	Story	Graph
Native Speaker Metaphor Frequency	12.3%	4.4%	18.3%

To sum up, the metaphor classes did not have a significant impact on the students' video ratings or overall metaphor and metonymy frequency. As it takes time to develop speaking skills, the students may have needed more practice to improve their speaking scores and integrate more metaphor and metonymy into their videos. In addition, the graph task was found to produce the most metaphor and metonymy, followed by the discussion task, and then the narrative task. This

goes against conventional wisdom, as narratives have traditionally been used to teach creative metaphor use; yet, when conventional metaphors, collocations, and idioms are taken into account, metaphor frequency is higher in academic discourse (Steen et al., 2010a, p. 195). Still, overall frequency is not the only thing to consider when it comes to metaphor and metonymy use. In this study, how much more effectively students could use metaphor and metonymy after instruction was the main focus, which will be discussed with respect to each task in the following sections.

3.3.5. Speaking task: discussions

For the discussion task, students picked two topics and discussed their opinions with a partner (see Appendix B and C). The metaphor and metonymy use on the discussion task for each group is shown in Table 37 below. Overall, it can be seen that simile was rarely used; however, both personification and metonymy occurred with some frequency as participants discussed abstract topics like the environment or the economy. In addition, language error in metaphor occurred at an average frequency of 0.5% - 1.5%, accounting for around 5% - 13% of the total metaphor use. Finally, only the EFL control students increased their overall metaphor use from the pre-test to the post-test, while the metaphor use of the other participants decreased.

When the pre-test and post-test scores were compared for each group using Wilcoxon signed-rank tests in SPSS, significant differences were found for the decrease in language error in metaphor for the EFL control group and for the decrease in personification and total metaphor without including language error for the ESL control group. No statistically significant differences were found for the experimental groups. Next, the EFL control group and experimental group and the ESL control group and experimental group were compared using the independent samples Mann-Whitney U-test. While no significant differences were found for the

EFL groups, there were statistically significant differences between the personification and other metaphor related words used by the ESL control and experimental groups on the post-test. In other words, the ESL experimental group used significantly more personification and other metaphor related words than the ESL control group on the post-test.

Table 37: Median Metaphor and Metonymy Use on Discussion Task (= significant at p<.05, means in parentheses)*

		EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 12)	
		Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Discussion Task	Median Metonymy (Mean)	0.5% (1.3%)	2.2% (1.9%)	1.5% (2.1%)	2.2% (2.3%)	0.8% (1.5%)	0% (0.5%)	1.7%* (2.2%)	0%* (0.5%)
	Median Simile (Mean)	0% (0.5%)	0% (0.2%)	0% (0.3%)	0% (0.1%)	0% (0.1%)	0% (0.1%)	0% (0.1%)	0% (0.0%)
	Median Personification (Mean)	2.1% (2.9%)	2.9% (2.4%)	0.9% (1.7%)	1.6% (1.8%)	1.4%* (1.5%)	0%* (0.3%)	1.7% (2.3%)	0.9% (1%)
	Median Other Metaphor Related Words (Mean)	4.7% (4.7%)	6.1% (6.7%)	5% (5.4%)	5.9% (6.5%)	5.5% (5.9%)	4.2% (4.9%)	5.5% (6%)	6.6% (7.3%)
	Median Language Error in Metaphor (Mean)	1.1%* (1.5%)	0.6%* (0.7%)	0% (0.5%)	0.7% (0.7%)	0.7% (0.7%)	0.5% (0.6%)	0% (0.7%)	0% (0.5%)
	Median Total (Mean)	10.9% (11%)	13% (11.8%)	11.1% (10.2%)	10.5% (11.5%)	9.6%* (9.6%)	5.3%* (6.5%)	10.4% (11.3%)	8.4% (9.3%)
	Median Total Without Language Error in Metaphor (Mean)	8.8% (9.5%)	12.4% (11.1%)	10.6% (9.7%)	10.1% (10.8%)	8.8%* (8.9%)	4.7%* (5.9%)	9.7% (10.6%)	7.3% (8.8%)

During the speaking lesson on discussing opinions (see Appendix M), students learned metaphorical expressions for structuring an argument and expressing an opinion. In contrast, the control groups practiced discussions with an emphasis on giving reasons and explanations without the focus on metaphor. Metaphorical expressions used by all four groups are shown in Table 38 below. Overall, students generally used the same few phrases, even after the metaphor instruction; however, the ESL experimental group added a few more phrases from the class to their video discussions on the post-test.

Table 38: Metaphorical Phrases Used by Students for Structuring Arguments

	EFL Control Group	EFL Experimental Group	ESL Control Group	ESL Experimental Group
Pre-Test	- "in my opinion" - "on the other hand"	- "in my opinion" - "agree with this point" - "point of view"	- "in my opinion" - "agree with this point" - "point of view" - "on the other hand"	- "in my opinion" - "on the other hand"
Post-Test	- "in my opinion" - "see your point"	- "in my opinion" - "point of view"	- "in my opinion" - "this point" - "side" - "on the other hand"	- "strongly believe" - "in my (honest) opinion" - "have two opinions" - "I see your point" - "point of view" - "on the other hand"

These phrases were used relatively infrequently, with a metaphor frequency between 0.2% and 0.6%, accounting for approximately 3% – 8% of the metaphorical language used on the discussion task. When the native speaker videos were analyzed, it also appeared that they did not use these phrases very often, with a frequency of 0.3% accounting for less than 3% of the metaphor used in the discussion task. In fact, much of the metaphorical language both students and native speakers used was either due to collocations, personification, or more topic-specific phrases, such as "environmentally friendly," or "green." This suggests that a better approach might be to focus more on metaphorical expressions used for specific topics than for metaphor used to structure arguments as a whole.

Of the three speaking tasks, the responses on the discussion task included the largest amount of metonymy, ranging from 0.5% – 2.3%. This is in line with Biernacka's (2013) study, which found a metonymy frequency in focus group discussions of 1.8% - 3.4%, depending on whether she included 'borderline' cases or not (p. 140). However, it should be noted that the amount of metonymy used by participants in this study varied greatly by the discussion question chosen; that is, some topics encouraged the use of metonymy more than others, as shown in the table below. Questions containing metonymy themselves or focusing on a political topic tended

to encourage more metonymy on the discussion task while questions that focused on students' opinions on specific topics without referencing a country, the government, or corporations tended to encourage less metonymy, as shown in Table 39 below. The findings here indicate for which discussion topics teachers may need to focus more on metonymy and for which topics metonymy is less useful.

Table 39: Top 3 Discussion Questions Encouraging the Most and Least Frequent Use of Metonymy on the Pre-Test and Post-Test Discussion Task

	Pre-Test	Post-Test
Responses Containing the Most Metonymy	- Who should be responsible for addressing a country's environmental issues: the government or individual citizens? - Which country in the world do you think is the most environmentally friendly, the least environmentally friendly? Why? - Do you think corporations are responsible for protecting the environment? Why or why not?	- Are companies more or less environmentally responsible now than they were in the past? Why do you think that is? - In your opinion, what is the biggest environmental problem in Ecuador today? Why is this such a big issue and what should be done to solve this problem? - Museums should return pieces of art to their country of origin. Do you agree with this statement? Why or why not?
Responses Containing the Least Metonymy	- Which is more true: human activity improves the conditions of living on earth and makes it a better place to live, or humans destroy our planet and lead it into decline? - Do you think animal testing should be banned? Why or why not? -Which is more important: increasing people's standard of living or protecting the environment?	- How important is protecting endangered species? What steps should be taken to protect animals? - Do you think graffiti should be considered art or should it be considered vandalism? Why? - Anything can be art. Do you agree with this statement? Why or why not?

Next, lexical units that were used metonymically by participants in the discussion task are shown in Table 40 below. It can be seen that many of the metonymically used lexical units were either country names, organizations, or pronouns referring back to these antecedents. The most common metonymically used lexical unit was "government," indicating either people who work in the government or laws or policies made by the government. The words "country" and "city" along with specific country names were used in a similar fashion to indicate either people who lived there, the people or policies involved in the government there, or the companies and businesses located there. Finally, "company," "factory" and "enterprise," were used to represent people who worked there or the decisions or policies made by people who worked there. As

indicated above, the type and frequency of the metonymy produced by students seems to be a direct result of the discussion question they chose. This suggests that the choice of other discussion questions or topics would result in different types and frequencies of metonymy use by the students, meaning that teachers may be able to predict appropriate metonymy use and design metonymy lessons around specific discussion questions and topics.

Table 40: Metonymy Used in Discussion Task

	EFL Control Group	EFL Experimental Group	ESL Control Group	ESL Experimental Group
Pre-Test	Government (6) China (2) Suissa (2) Corporation (2) Belgium (1) French (1) Iceland (1) Ireland (1) It (1) World (1)	Company (5) Iceland (4) Costa Rica (3) World (3) Both (2) Government (2) They (2) Argentina (1) Corporations (1) Country (1) Ecuador (1) Factories (1) French (1) Germany (1) Industry (1) Switzerland (1) Uruguay (1)	Government (10) Corporation (5) Technology (3) United States/ US (2) China (1) Community (1) FDA (1) Japan (1) Kuwait (1)	Government (15) Country (7) New Zealand (3) Europe (2) Singapore (2) America (1) City (1)
Post-Test	Government (10) They (7) Amazon (4) Companies (4) Local Places (3) Cities (2) Countries (2) Ecuador (3) Factories (1) Society (1)	Companies (8) Government (7) Ecuador (4) Country (3) Factories (3) Laws (2) Good Living (2) Coca-Cola (1) Enterprise (1) They (1) Universities (1)	Museum (4) New York (City) (3) America (2)	Museum (4) China (1) Class (1) Community (1) Government (1)

Finally, it should be noted that a few students used similes and analogies effectively on the pre-test or post-test discussion tasks. For example, two students in the ESL control group compared graffiti to a message when discussing why they believed graffiti should be considered art. Several students in the EFL groups created similes to describe nature and environmental issues, for example, saying that "our population is like a disease to the planet," and that "nature is like a person with rights." Finally, two of the ESL experimental group students used analogies to explain concepts on the post-test. To discuss stealing art from another country, one student used the analogy of her pencil, saying that if another student stole it, the pencil would not reflect her style just as art stolen from another country does not reflect the local style of the country

where it is displayed. Another student used the example of his watch, which he believed would become a valuable artifact in the future when it was no longer produced. The student used this example to explain why he thought anything could be considered art, although one might have to wait until a future date. These examples show that using similes and analogies can be an effective way for students to express abstract ideas in a more concrete way, so this could be another focus for teaching students to use metaphor in their L2.

Overall, the metaphor instruction did not have a significant impact on participants' metaphor use or metaphoric competence on the discussion task. Even after metaphor instruction, metaphorical expressions to structure arguments appeared relatively infrequently in the student videos. As these also appeared relatively infrequently in the native speaker videos, it was suggested that teachers might want to focus on topic specific metaphor as well as the use of similes and analogies to further explain one's position instead. In contrast, a fair amount of metonymy was used on the discussion task. In addition, as some discussion questions were found to encourage more metonymy use than others, it was suggested that teachers take this into consideration when teaching metonymy for discussion tasks.

3.3.6 Speaking task: narratives

On the narrative task, students had to tell a story from their childhood. Metaphor use for each group on the narrative task is shown in Table 41 below. Overall, it can be seen that the participants used very little metonymy, simile, or personification on the narrative task. In addition, overall metaphor frequency was much lower on the narrative task, with language error in metaphor accounting for 7% - 28% of total metaphor use.

When the pre-test and post-test frequencies were compared for each group using the Wilcoxon signed-rank test, significant differences were found for the decrease in total not

including language error for the ESL control group as well as for the increase in simile use and total not including language error for the ESL experimental group. No significant differences were found for either EFL group. Next, the EFL control group and experimental group and the ESL control group and experimental group were compared using the independent samples Mann-Whitney U-test. The only significant differences were found for the simile use, total, and total without language error on the post-test of the ESL experimental group compared with the control group. Although both experimental groups studied similes in the metaphor classes, only the students in the ESL experimental group really incorporated similes into their narratives.

Table 41: Median Metaphor and Metonymy Use on the Narrative Task (= significant at p<.05, means in parentheses)*

		EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 12)	
		Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Narrative Task	Median Metonymy (Mean)	0% (0%)	0% (0%)	0% (0.1%)	0% (0%)	0% (0%)	0% (0.1%)	0% (0%)	0% (0.1%)
	Median Simile (Mean)	0% (0.1%)	0% (0%)	0% (0.2%)	0% (0.1%)	0% (0.1%)	0% (0%)	0%* (0%)	1.3%* (1.6%)
	Median Personification (Mean)	0% (0%)	0% (0.2%)	0% (0.2%)	0% (0.2%)	0% (0.1%)	0% (0%)	0% (0.3%)	0% (0.1%)
	Median Other Metaphor Related Words (Mean)	3.9% (3.6%)	2.7% (3.7%)	2.3% (2.3%)	3.9% (4.6%)	3.7% (3.7%)	2.9% (3.6%)	4.8% (4.6%)	3.2% (4.2%)
	Median Language Error in Metaphor (Mean)	0% (0.9%)	0% (0.3%)	0.6% (1.1%)	0.6% (0.8%)	0% (0.4%)	0% (0.2%)	0.3% (0.8%)	0% (0.3%)
	Median Total (Mean)	4.4% (4.6%)	3.6% (4.2%)	3.5% (3.9%)	5.9% (5.7%)	4.3% (4.4%)	3.2% (3.9%)	5.4% (5.7%)	5.7% (6.3%)
	Median Total Without Language Error in Metaphor (Mean)	4.2% (3.7%)	3.6% (4.2%)	2.3% (2.8%)	5.9% (5.7%)	3.8% (3.9%)	3% (3.7%)	5.1% (4.9%)	5.6% (6%)

During the speaking lesson on telling stories (see Appendix M), students first practiced making new similes and metaphors, made novel similes and metaphors about a family member, watched a native speaker telling a story in English, and finally told a story involving their own family member. In contrast, the control group's lesson on telling stories focused on developing stories with a clear beginning, middle, and end, as well as adding more details in general to their stories. Since the focus of the metaphor lesson was on descriptive simile and metaphor, the

number of similes and metaphors for description were counted on both the pre-test and post-test videos, as shown in Table 42 below. As the table shows, the number of students using similes and metaphors for description decreased for the control groups but stayed the same or increased for the experimental groups. This was particularly true for the ESL experimental group since two-thirds of the students used similes or descriptive metaphors on the post-test. When the pre-test and post-test simile use for each group was compared using the Wilcoxon signed-rank test in SPSS, both the decrease for the EFL control group and the increase for the ESL experimental group were found to be statistically significant, while the other two groups did not show significant differences in descriptive simile and metaphor use from the pre-test to the post-test. These results suggest that the narrative lesson did encourage students to use more metaphor for description in their stories, at least for the ESL experimental group.

Table 42: Metaphor in Student Narratives (= significant at p<.05)*

	EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 12)	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Descriptive Similes/Metaphor	4	0	3	5	1	0	1	16
Students Using Descriptive Similes/Metaphor	4/11* (36%)	0/11* (0%)	2/11 (18%)	2/11 (18%)	1/12 (8%)	0/12 (0%)	1/12* (8%)	7/12* (67%)
Difference in Students Using Descriptive Similes/Metaphor	- 4/11* (-36%)		0/11 (+0%)		- 1/12 (-8%)		+6/12* (59%)	

Table 43 below gives examples of similes and metaphors students used on the pre-test and post-test narrative speaking task. After the narrative lesson, the experimental students were more likely to use both conventional and creative metaphors and similes to add descriptions and details to their stories. For example, the experimental students from both groups used conventional phrases like “asleep like a rock,” “a deep sleep,” and “sleep like a baby” to add

details about how they were sleeping. Other common conventional expressions used included "as hard as a rock," "as sharp as a knife," "as slow as a turtle," and "so hungry I could eat a horse." As Littlemore and Low (2006a) note, the lack of a repertoire of familiar, prefabricated figurative expressions contributes to the difficulty students have interpreting and using metaphor in their L2 (p. 6). The increased use of conventional expressions in the ESL experimental group suggests that the metaphor lesson may have started to make up for this shortage.

Table 43: Examples of Metaphor in Student Narratives

	EFL Control Group	EFL Experimental Group	ESL Control Group	ESL Experimental Group
Pre-Test Examples	- "have a big problem" - "take a long trip" - "it was a short moment" - "like WW wrestling"	- "the candle set fire to her hair and she was like a torch" - "cut her hair like a mushroom" - "it could be said that we were close to death"	- "it was like my ears closed"	- "the sound was really strong"
Post-Test Examples	No Examples	- "have a heavy dream, a heavy sleep, a deep sleep" - "asleep like a rock" - "we lost in there because it's like a ring"	No Examples	- "sleeping like a baby" - "got dressed as fast as a cheetah" - "my sisters and I were like professional robbers" - "we got our gold" - "my life was as slow as a turtle" - "she told me some word as hard as rock and as sharp as knife" - "she was my sister in crime" - "so hungry I could eat a horse" - "had a heart as a baby heart" - "he loves problems as someone loves his wife or wife loves her husband" - "I just run as a fighter plane"

When it comes to more creative expressions, some participants used metaphorical language more effectively than others. For example, on the post-test, one of the experimental ESL students used the expression "sister in crime," a play on the expression "partner in crime" as his "partner" was actually his "sister." This is quite a nuanced way to use metaphor in his L2. Another example of effective use of non-conventional metaphor on the post-test was when an

experimental ESL student described her and her sisters as “professional robbers” who “got our gold” when they successfully stole chocolates from their mother’s closet. In contrast, other students were less successful. For example, one student tried to use a conventional expression by saying she “got dressed as fast as a cheetah” on her post-test video. However, this seems like an unnatural expression as cheetahs do not actually “get dressed.” Another example is the expression “run as a fighter jet.” Since jets do not actually run, this expression seems inappropriate as well. A final example is the expression “had a heart as a baby heart,” which at first glance seemed like it must be incorrect transfer of a metaphorical expression directly from Arabic to English. However, consultation with native Arabic speakers revealed that this was not a conventional metaphorical expression in Arabic. It would seem ineffective to use such an opaque expression as “have a baby heart,” when more appropriate conventional expressions like “warm-hearted” or “soft-hearted” would convey the same meaning more clearly.

To sum up, the metaphor class on telling stories encouraged students to use more descriptive similes on the post-test narratives, particularly for the ESL experimental group. Indeed, no students from either control group used similes or metaphors to add descriptive details to their stories on the post-test at all. This suggests that students may not develop metaphor skills on their own and might benefit from direct instruction of metaphor. However, it should also be noted that the native speakers did not use any descriptive similes or metaphors on the narrative tasks either. Moreover, the native speakers used less metaphor on the narrative task than on the other two tasks. Therefore, it might be better for teachers to focus more on common collocations, phrasal verbs, and idioms rather than more descriptive and creative uses of metaphor in narratives.

3.3.7 Speaking task: graph descriptions

For the graph description task, participants had to describe a graph and explain what it meant. Metaphor use on the graph task is shown in Table 44 below. While no group used metonymy or simile on the graph task, personification and other metaphor occurred with some frequency. In fact, participants used both more personification and more overall metaphor on the graph description task than on any other speaking task.

When the pre-test and post-test metaphor frequencies were compared for each group using Wilcoxon signed-rank tests in SPSS, significant differences were only found for the decrease in total metaphor not including language error for the ESL control group. No significant differences were found for either EFL group or the ESL experimental group, meaning that the metaphor instruction did not lead to a significant increase in metaphor use. Next, the EFL control group and experimental group and the ESL control group and experimental group were compared using the independent samples Mann-Whitney U-test. While no significant differences were found for the EFL groups, there were statistically significant differences between the other metaphor related words, the total, and the total without language error used by the ESL control and experimental groups on the post-test. In other words, the ESL experimental group used significantly more metaphor than the ESL control group on the post-test.

Table 44: Metaphor and Metonymy Use on the Graph Description Task (= significant at p<.05, means in parentheses)*

		EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n = 12)	
		Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Graph Task	Median Metonymy (Mean)	0% (0.5%)	0% (0.4%)	0% (0%)	0% (0%)	0% (0.1%)	0% (0%)	0% (0%)	0% (0%)
	Median Simile (Mean)	0% (0.1%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)
	Median Personification (Mean)	0.5% (1%)	1.2% (1.7%)	0.9% (1.3%)	2.3% (3%)	1.9% (2.3%)	1.9% (2.3%)	3.8% (3.9%)	3.3% (4%)
	Median Other Metaphor Related Words (Mean)	9.2% (9.1%)	9% (8.7%)	9.1% (9.6%)	10.7% (10.5%)	10.7% (11.4%)	8.8% (9.6%)	13.1% (14.5%)	13.3% (14%)
	Median Language Error in Metaphor (Mean)	0% (0.3%)	0.7% (0.6%)	0% (0.2%)	0% (0.4%)	0% (0.8%)	0% (0.7%)	0% (0.9%)	0% (0.5%)
	Median Total (Mean)	11.3% (11.1%)	10.8% (11.5%)	11% (11.1%)	12.2% (13.8%)	13.4% (14.5%)	13.2% (12.6%)	17.6% (19.3%)	20.2% (18.5%)
	Median Total Without Language Error in Metaphor (Mean)	10.9% (10.8%)	10.5% (10.9%)	10.7% (10.8%)	12.2% (13.4%)	12.6%* (13.8%)	11.7%* (11.9%)	16.8% (18.4%)	18.6% (18.1%)

For the speaking lesson on graphs, participants in the experimental group first discussed commonly used metaphorical verbs, adjectives, and adverbs for describing a graph. Then, the students practiced drawing and describing graphs, completed a gap-fill, and described new graphs aloud (see Appendix M). The control groups completed the same describing and gap-fill activities without a focus on metaphorical verbs, adjectives, and adverbs.

Table 45 below shows students' use of motion verbs, adjectives, and adverbs on the graph task. Motion verbs include words like peak, rise, jump, fall, drop, and level off, which describe the motion of the graph using metaphorical language. Adjectives and adverbs include words like rapidly, slowly, sharply, significant, and rapid, which further describe the type of motion shown in the graph. Altogether, these motion verbs, adjectives, and adverbs accounted for up to a fourth of all metaphor used on the graph task. As the table shows, all the groups increased in their use of motion verbs, adjectives, and adverbs except for the ESL experimental group, which only decreased by 0.1%. When the pre-test and post-test frequencies were compared for each group using Wilcoxon signed-rank tests, statistically significant differences

were found for the adjective/adverb use and for total use of motion verbs, adjectives and adverbs for both EFL groups but not for either ESL group.

In addition, it should be noted that the metaphor classes also affected the range of different motion verbs, adjectives, and adverbs used, particularly for the EFL experimental group. That is, since much of the metaphorical language on the pre-test was accounted for by just a few words that students often used, such as "go up," and "go down," it is also important to look at the number of different words they used. The EFL experimental group used only 5 different motion words on the pre-test, but 11 on the post-test, showing a large increase in range of metaphorical motion words used. However, the EFL control group also increased from 4 different motion words on the pre-test to 10 on the post-test. In contrast, the ESL groups started with a larger range of motion words on the pre-test, so their range of motion words decreased slightly on the post-test.

Table 45: Verbs, Adjectives, and Adverbs used in the Graph Speaking Task (= significant at p<.05)*

	EFL Control Group (n = 10)		EFL Experimental Group (n = 11)		ESL Control Group (n = 12)		ESL Experimental Group (n =12)	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Total Motion Verbs Used	9	15	7	22	22	27	32	21
Percent	0.7%	1%	0.5%	1.6%	1.6%	2.2%	2.4%	1.8%
Total Adjectives/ Adverbs Used	0	9	0	4	10	12	13	18
Percent	0%*	0.6%*	0%*	0.5%*	0.7%	1%	1%	1.5%
Total	0.7%*	1.6%*	0.5%*	2.1%*	2.4%	3.2%	3.4%	3.3%
Total Number of Different Lexical Units Used	4	10	5	11	16	14	19	17
Difference Total	+0.9%*		+1.6%*		+0.8%		-0.1%	
Difference Number of Lexical Units Used	+6		+10		-6		-3	

For comparison, videos of native speakers were also analyzed for use of these motion verbs, adjectives, and adverbs, as shown in Table 46 below. While the ESL experimental group used the highest frequency of these words on the post test, none of the student groups had similar frequencies to the native speakers. This suggests that the students in this study might communicate more effectively if they used more metaphorical expressions when describing graphs. Moreover, not only did the native speakers use more metaphor on the graph task than on the other two speaking tasks, but about a third of the metaphor came from these types of motion words. These results suggest that linguistic metaphors that conceptualize a graph as motion over time are highly productive in describing graphs. As such, incorporating these metaphorical expressions into instruction might help students learn to describe graphs more naturally and accurately in their L2.

Table 46: Verbs, Adjectives, and Adverbs used Metaphorically by Native Speakers on the Graph Description Task

Motion Verbs Used	43
Percent	3.8%
Adjectives/ Adverbs Used	17
Percent	1.5%
Total	5.3%

Overall, the results of the study suggest that lessons focusing on specific metaphorical language for completing a target speech function can help students use metaphorical language more appropriately in their L2. This was particularly true for the EFL experimental students, who improved both their range of metaphoric vocabulary and their metaphor frequency when describing graphs. However, as none of the students reached the frequency of metaphor used by native speakers, it was also suggested that all participants could improve their metaphoric competence for describing graphs by incorporating more metaphorical expressions into their spoken production for this task.

3.4 How does explicit instruction in the use of metaphor and metonymy affect student performance in an ESL context compared with student performance in an EFL context?

As this study was conducted in both an EFL and an ESL context, it was possible to compare how the metaphor instruction was received in each setting. It was hypothesized that the ESL students would benefit from increased exposure to metaphorical input through immersion in the target language community while the EFL context might make it easier to predict student challenges and prepare lessons since the students came from the same language and cultural background. Thus, it was unclear each situation might alter the effectiveness of the instruction.

Overall, based on the results reported above, it can be seen that the specific context actually had little impact on the effects of the metaphor instruction; instead, task type, topic, and input material had a greater effect on students' metaphor and metonymy use than whether they were studying in an EFL or ESL classroom. On the comprehension tests, neither group showed significant improvement on the reading test while only the ESL experimental students showed significant improvements on the listening test. The ESL students showed significant improvements on the metaphor awareness test, and the scores of the EFL experimental group and the ESL Reading/Writing experimental group improved significantly on the post-test metaphor interpretation task. In writing, both experimental groups increased their overall metaphor frequency on the post-test although only the EFL experimental group improved their writing scores. For speaking, although neither group showed much improvement on the discussion task, the ESL experimental group added significantly more descriptive similes and metaphor to their narratives while the EFL experimental group added significantly more motion verbs, adjectives, and adverbs to their descriptions of graphs on the post-test. Although these results indicate that

the EFL experimental group improved over the ESL group in some areas and vice versa, overall, the metaphor classes had a modest effect on both groups of students.

One area in which the EFL and ESL students differed was the amount of metaphor and metonymy used on the writing task, indicating that task type and topic affect students' metaphor and metonymy use. As discussed above, the EFL students used much less metaphor and metonymy on their writing samples than the ESL students. This was most likely caused by the different writing tasks rather than the context since the EFL students wrote narratives while the ESL students read a newspaper article and wrote a summary/response. Similarly, the choice of discussion question was found to influence the amount of metonymy students' used in their video samples, with some questions encouraging more metonymy use than others. This suggests that rather than focusing on the context, it might be more useful to focus on which tasks require the most metaphor and metonymy and what teaching methods or materials might be most effective for each specific task.

Finally, both the EFL and ESL students had positive attitudes towards the metaphor instruction and gave positive feedback on the end of course surveys, which will be discussed in more detail in section 3.6 below. Given that both groups of students made modest improvements in some areas of metaphor awareness and metaphoric competence and that all students enjoyed the classes, it can be concluded that explicit metaphor instruction can be somewhat beneficial in either an EFL or an ESL context.

3.5. Conceptual metaphors used on the writing and speaking tasks

Although the metaphor classes did not focus on specific conceptual metaphors, instead discussing authentic examples that arose in reading and listening passages or focusing on using metaphorical language more generally in written and spoken production, the participants in the

study frequently used two specific metaphors: sight metaphors and time metaphors. Each of these will be discussed in more detail below.

3.5.1 Participants' use of sight metaphors

As Conceptual Metaphor Theory (CMT) views metaphorical thought as grounded in human experience (Deignan, 2005; Kövecses, 2005; Lakoff and Johnson, 1980), perceptive senses like sight serve as productive source domains for linguistic metaphors. Table 47 below shows the participants' use of sight metaphors in the three speaking tasks. The metaphorical use of seeing appeared most often in the discussion task as students expressed their own opinions and responded to their partner's views. Non-figurative uses of see were more common than figurative uses of see on the graph description task as participants used phrases like "as we can see here," or "as you can see." Metaphorical uses of sight were almost non-existent in the narrative tasks, as participants literally described physical things they had seen.

Table 47: Participants' Use of SIGHT Metaphors in Video Tasks

	EFL Control Group Speaking		EFL Experimental Group Speaking		ESL Control Group Speaking		ESL Experimental Group Speaking		Total
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	
Discussion	1 (see)	4 (see, clear)	3 (see)	3 (focus, see, view)	7 (focus, see, and view)	0	2 (see)	10 (look, see, reflect, view)	30
Narrative	1 (see)	1 (clear)	0	0	0	1 (look)	0	0	3
Graph	2 (see, view)	3 (see, view)	1 (see)	0	2 (clear, see, focus)	1 (clear)	4 (focus, clear)	0	13

While MacArthur et al. (2015) focused on the use of SEEING IS UNDERSTANDING when reasoning about knowledge during lecturers' office hours, in this study, the most common use of seeing was to describe and give opinions during the discussion task, as shown in the examples in Table 48 below. This is most likely due to the different context, as MacArthur et al.'s (2015) research focused on discussions during office hours in which lecturers answered

student questions while the current research focused on non-native learners of the same social status having a friendly conversation together. Moreover, while the examples below show that the participants were able to use sight metaphors in English, they were still used relatively infrequently, accounting for only between 1% and 9% of the metaphor used on the discussion tasks.

Table 48 Examples of Sight Metaphors in Discussion Tasks

Describing Others' Opinions	Giving Own Opinion
- "some people see graffiti to be as vandalism" - "Because people are like facing the issue, seeing the issue, and maybe feeling the issue." - "see the nature like a person with rights" - "I see your point . . ." - "I'm look on the attitude like part of the art." - "they (street artists) try to reflect the actual society" - They, if they look, look at it in uh, each way."	- "we have to focus on the environment" - "we can see the really important that is the environment" - "I want to see their history" - "my point of view" - "I consider that we have to see the environment and us one only thing."

Sight metaphors were also common in the ESL writing samples, but not in the EFL writing samples, as shown in Table 49 below. As with the speaking samples, the EFL students wrote narratives and used sight verbs to describe what they had physically seen whereas the ESL students used sight verbs more figuratively to describe the author's opinions. These results align with the metaphor frequencies reported above in which narrative tasks produced the least amount of metaphor compared with the other speaking and writing tasks. For the ESL students, while the most common verb used in sight metaphors was "see," the students also used "focus," "look," "view," "reflect," and "clear" metaphorically in their writing.

Table 49: Participants' Use of Sight Metaphors in Writing Tasks

EFL Control Group		EFL Experimental Group		ESL Control Group		ESL Experimental Group	
Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
0	0	1 (see)	2 (view)	6 (focus, look, see, clear)	16 (look, see, reflect, view, clear)	5 (focus, see, view)	26 (focus, look, see, view)

As shown in the examples in Table 50 below, the main use of sight metaphors in writing was to give others' opinions. In contrast to the discussion tasks, the ESL students did not

frequently use sight metaphors to give their own opinions, with only one student using the phrase "my point of view," and another writing "as I see it." Rather than using sight metaphors, most students directly stated their opinion by saying something like "I agree with the author," or "I don't agree with the author's point." Perhaps with more targeted instruction on using sight metaphors for expressing one's opinion the students might have incorporated more of these types of metaphor into their written summary/responses.

Table 50: Examples of ESL Students Use of Sight Metaphors in Writing Tasks

ESL Control Group Examples	ESL Experimental Group Examples
-"some statistics **focus on** the qualities and situations that differentiate the heroes from the rest of people" -"there are a **clear** different between a hero and bystander" -"how people think and **look at** heroes" -"these days I can **see** this has a positive impact on my personality" -"As we can **see** from my experience" -"The parents can learn their kids to assist other people and this will **reflect** in their future to be good person" - "they just think rescue first and **reflect** second" -"I agree with her **point of view**" -"**Clearly**, the human can help others in the hard situations"	-"This can be explained by **seeing** the disparity between the levels of people's living" -"the United States should isolate its economy from foreign counties and affairs, also to **focus on** its own problems" -"people always **look through** self-interest" -"people may **look beyond** narrow self-regard" -"they **looking** for this concept in a bad way" -"people **see** that globalization has several disadvantages" -"people **see** the globalization by their interest" -"It **can be seen** when even in United Stated there is specific neighborhoods for Chinese, Arabs, and other nationalities" -"they start to **change their view** of globalization" -"they have their own **worldviews** and perspectives" -"people **view** is different toward industry"

While the students were able to use sight metaphors spontaneously without targeted instruction, both the spoken and written examples suggest that students could benefit from instruction on this specific conceptual metaphor. That is, while the students understood the overall conceptual metaphor, they could not always express it linguistically in English. For example, in the discussions, students used phrases like "I'm look on the attitude," instead of "I see," and "they look at it in each way," instead of "if they look at it from a different viewpoint," or "see it in a different light." The written samples include phrases like "how people look at

heroes" instead of "how people view heroes" and "they looking for this concept in a bad way" instead of "they see/view this concept negatively/in a bad light." These results are similar to Falck's (2012) study, which found that Swedish students used "way" more often than "road" and "path" in linguistic metaphors of LIFE IS A JOURNEY, showing that cross-linguistic transfer occurs even when two languages share the same conceptual metaphors. In other words, even when students already know a conceptual metaphor, it is important to teach them how it is realized linguistically in their second language.

3.5.2 Participants' use of time metaphors

While the previous section focused on metaphors using the source domain "SEEING," this section will discuss participants' use of metaphors with the target domain "TIME." Surveying the L.O.B. Corpus and Brown Corpus, Boers (1996) identified three main conceptions of time among native English speakers: (p. 209).

i) TIME AS A CONCRETE SUBSTANCE (ontological metaphor)
ii) TIME AS A PATH THAT WE MOVE ON
iii) TIME AS A MOVING OBJECT

Boers (1996) further discusses the second and third conceptual metaphor, saying that they are both dynamic conceptualizations of time as motion with the concept of time as a path being more productive in English than time as a moving object (pp. 209-210). Similarly, Moore (2014) emphasizes "moving ego" and "ego-centered moving time" conceptual frames to explain how time is perceived in language. That is, time is conceptualized as motion with either the speaker moving through time or the speaker standing still while time moves by. Other researchers (Kövecses, 2010, p. 26; Shinohara and Pardeshi, 2011) have also focused on motion and movement as essential mappings for describing time.

In contrast, Graf (2011) separates time metaphors into four categories: TIME IS A MOVING ENTITY, TIME IS A LOCATION, TIME IS AN EXTENSION IN SPACE, and TIME IS DISTANCE. Graf (2011) further separates TIME IS A LOCATION into two subtypes: TIME IS A POSITION IN SPACE and TIME IS A CONTAINER. TIME IS A MOVING ENTITY encompasses both the ego moving metaphor and the time moving metaphor.

Using the same categories, the TIME metaphors used by the study participants were counted, analyzed, and categorized, as shown in Tables 51 and 52 below. It can be seen that the participants used decidedly more non-motion metaphors of time than moving metaphors of time in both writing and speaking. In fact, there were only 4 instances of "ego-centered moving time" in the videos of all the participants and 0 instances the writing samples. This is in contrast to the research cited earlier, which often focuses on TIME as conceptualized through motion.

Table 51: Participants' Use of TIME metaphors on Video Tasks

Non-Motion Metaphors		TIME IS A MOVING ENTITY
1. TIME IS A POSITION IN SPACE (33) - at the same time (3) - at (3) - at night/midnight (4) - at the/that moment/time (4) - at the end of the day/month (4) - at the/that/this time (15) 2. TIME IS A CONTAINER (256) - In that amount of time (1) - In this decade (1) - in the summer (1) - in December (1) - in the afternoon (2) - in that/this year (4) - in this/that period (8) - in this/that/these years (16) - in the moment (19) - in (specific year), the past/the future (203)	3. TIME IS AN EXTENSION IN SPACE (4) - short moment (1) - a longer/long time (3) 4. TIME IS DISTANCE (197) - near future (1) - in between the years (2) - between (50) - from (64) - to (80)	1. EGO MOVING METAPHOR (41) - go back (2) - over the years (5) - through/throughout the years (34) 2. TIME MOVING METAPHOR (4) - by the years (2) - day by day (1) - time was go on (1)
TOTAL = 490		TOTAL = 45

Table 52: Participants' Use of TIME metaphors on Writing Tasks

Non-Motion Metaphors		TIME IS A MOVING ENTITY
1. TIME IS A POSITION IN SPACE (24) - at second or third year (1) - on that year (1) - on the weekend (1) - at the afternoon (1) - at the morning (1) - at the final of the day (1) - end of the month (1) - from the beginning (1) - at the same time (2) - on time (2) - at (3) - at that/this moment (3) - at the beginning/end (6) 2. TIME IS A CONTAINER (47) - in this time (1) - in this epoch (1) - on the first months (1) - in their childhood (1) - in that period of time (1) - in my second year (1) - in the middle of the semester (1) - in bad/difficult moments (2) - in this semester (1) - in the first/second/last day (2) - in the end (3) - in the morning (3) - in this/that moment (4) - in (specific year), the past/the future (25)	3. TIME IS AN EXTENSION IN SPACE (1) - long time (1) 4. TIME IS DISTANCE (3) - between (1) - from (1) - to (1)	1. EGO MOVING METAPHOR (3) - we passed a good time (1) - over time (2) 2. TIME MOVING METAPHOR (0)
TOTAL = 75		TOTAL = 3

While this lack of moving metaphors of time might be partly attributed to the interlanguage of the students, whose language skills might not be developed enough to utilize more complicated conceptualizations of TIME as motion in their L2, the native speaker samples also utilized relatively few instances of TIME metaphors of motion, as shown in Table 53 below. The native speakers were six times more likely to use a non-motion metaphor of time than a moving metaphor of time, with TIME MOVING METAPHORS occurring only once. In other words, the native speakers were less likely to conceptualize time as motion and if they did, they

were more likely to conceptualize themselves moving through time than time moving. While much literature focuses on moving metaphors of time, for these particular participants as well as the native speakers completing these particular tasks, spatial and ontological representations of time were found to be more common than motion metaphors of TIME. Although overall frequency should not be the only consideration when designing course curricula, the general lack of moving metaphors of time, particularly TIME MOVING METAPHORS in all three speaking tasks as well as the writing tasks, raises questions about whether teachers should bother incorporating them into their language classes, despite the focus these metaphors have received in the literature.

Table 53: Native Speakers' Use of TIME metaphors in Speaking Tasks

Non-Motion Metaphors		TIME IS A MOVING ENTITY
1. TIME IS A POSITION IN SPACE (9) - at (3) - at this/that/the time (6) 2. TIME IS A CONTAINER (23) - in (23)	3. TIME IS AN EXTENSION IN SPACE (1) - longer in time (1) 4. TIME IS DISTANCE (21) - between (2) - to (9) - from (10)	1. EGO MOVING METAPHOR (8) - looking back (1) - in time we go (1) - over (2) - through/throughout (2) - back then (2) 2. TIME MOVING METAPHOR (1) - a few years will pass (1)
TOTAL = 54		TOTAL = 9

In addition, as noted previously in the discussion of SIGHT metaphors, a number of language errors and miscollocations can be seen in the students' use of TIME metaphors. The most common language errors in metaphor were the use of incorrect prepositions, but students also came up with awkward phrases like "in this epoch," which seemed out of place in a simple narrative, or "we passed a good time." Again, this shows that even when students have the same conceptual metaphors in their native language, they will still need guidance and practice to accurately express those ideas linguistically in their second language.

3.6 Results of the course evaluation

Finally, to determine students' attitudes towards the metaphor instruction, participants in the experimental group answered a course survey about the metaphor instruction at the end of the class. Overall, the results in Table 54 below indicate that students generally had a positive attitude toward the metaphor classes and felt that the classes were useful, helping them improve their English skills. In addition, students in all three experimental groups strongly agreed that it is important to understand and use metaphor in English; however, they also generally rated their improvements in using metaphor in speaking and writing lower than their improvements in understanding metaphor in listening and reading passages. In other words, students felt that their receptive skills had improved more than their productive skills with regard to metaphor.

Table 54: Results of Course Evaluation Forms for Experimental Groups (1=strongly disagree with the statement, 10= strongly agree with the statement)

	EFL Experimental Group	ESL Experimental Reading/Writing	ESL Experimental Listening/ Speaking
1. I think it's important to be able to understand and use metaphor in English.	8.8	9.5	9.3
2. The class activities and worksheets on reading metaphor were useful to me.	8.6	9.6	N/A
3. The class activities and worksheets on listening to metaphor were useful to me.	9.2	N/A	9.2
4. The class activities and worksheets on speaking with metaphor were useful to me.	8.9	N/A	9.4
5. The class activities and worksheets on writing with metaphor were useful to me.	9.4	9.6	N/A
6. I improved in my ability to understand metaphor in reading texts because of this class.	8.8	9.5	N/A
7. I improved in my ability to understand metaphor in listening texts because of this class.	8.2	N/A	9.2
8. I improved in my ability to use metaphor in my speaking because of this class.	8.6	N/A	8
9. I improved in my ability to use metaphor in my writing because of this class.	8.8	8.6	N/A
10. I learned a lot from watching my own videos and completing the self-reflection form.	8.3	N/A	7.9
11. I can identify and understand metaphor in English.	7.9	8.5	8.7
12. I can use metaphor accurately in English.	7.5	7.8	7.7
13. In general, my English skills improved because of the metaphor classes.	8.3	9	8

Along with these general questions, students also answered the open-ended questions shown in Table 55 below, which summarizes the answers with one or two example comments from students. Overall, students seemed to like the course, saying that the activities were useful and interesting. The most common negative comments were that the materials were too difficult, especially the metaphorical language in TED Talks and newspaper articles. Students also complained about personally not liking specific activities, like telling stories or watching videos. However, to become fluent in a language, students must be able to understand a wide range of reading and listening texts, as well as complete a wide range of speaking and writing tasks, so it is unlikely that students will enjoy every single type of task on a personal level. In addition, students expressed uncertainty about using metaphor in their productive skills, suggesting that it might be easier for students to deal with metaphor they encounter in listening and reading texts than incorporate them into their own speaking and writing.

Table 55: Comments on Course Evaluations

	EFL Experimental Group	ESL Experimental Reading/Writing	ESL Experimental Listening/Speaking
1. Which activities in the metaphor classes were the most interesting or useful for you? Why?	Writing = 3 Reading Articles = 3 Songs = 3 Telling Stories = 2 TED Talks = 1 -"When Amanda showed figurative language. When without words, I learned that one image is more useful than another image."	All Activities = 4 students Reading = 5 Writing = 3 Metaphor Identification = 2 Explicit Metaphor Instruction = 2 - "All of the figurative language in classes were helpful and interesting. Because the teacher explained the beauty of giving an image as a picture for the words and sentences."	TED Talks: 3 Songs: 5 Speaking Practice: 4 Explicit Metaphor Instruction: 3 Other = 1 - "Songs were the most interesting because it make me know how to catch the figurative language while listening to songs." - "When we saw the video about metaphor and we talk about it in class. I understand a lot of figurative language that I cannot understand it before."
2. Which activities in the metaphor classes were the least interesting or useful for you? Why?	Nothing = 4 Reading (too difficult) = 1 Reading (boring) = 2 Videos = 2 Songs = 1 Telling Stories = 2 -"The least interesting activity for me was telling stories because I don't like it tell stories about myself, for that reason I didn't like that activity in the class."	Nothing = 5 Reading (too difficult) = 3 Reading (boring) = 2 - "It was reading article that have lots of figurative language and I could not understand at all." - "Anything talk about the climate. Because we see like this in IELTS test or TOEFL." - "In fact, all activities were interesting and useful (believe me)."	Nothing = 4 Ted Talks = 4 Graphs = 3 Songs = 1 Telling Stories = 1 - "They were all helpful." - "The graph because I don't like graphs." - "Doing Ted Talk because it's too long and some words I never see before."
3. Did the classes make you more aware of and better able to understand metaphor in English? Was this helpful for you?	Yes = 11 No = 0 -"I think the class about figurative language was useful for my English. We need to understand this type of communication because if we can communicate with native people of the US, we need to understand that because they always use figurative languages." -"Yes, I think the use of figurative language is important, especially to try to understand something that would be difficult."	Yes = 10 No = 1 - "The classes made me more aware because now I feel good when I understand it and use it in my writing." - "Yes, of course. It is really helpful for me to understand the sentence better that can make me understand the article better."	Yes = 13 No = 0 - "Yes it does. It was helpful because now when I hear some of the figurative language that I learned, I can understand the meaning." - "Yes, because sometimes when I heard figurative language I was not understand anything and I told myself what did he mean, but now I understand."
4. Did the classes help you use more figurative language when speaking English? Was this helpful for you?	Yes = 11 No = 0 -"Yes it did. It was helpful for me when we spoke between us and discussed about any topic."	Yes = 9 No = 2 - "Not that much, but I became using them more than before." - "Yes, figurative language make my essay and writing become more interesting. It is really helpful me."	Yes = 12 No = 1 - "I won't say it doesn't help because I learned what is figurative language and how to use it, but I don't use figurative language while I'm speaking." - "Yes, because of this class, I know more about it, so I started using it because it is more interesting to use words in different meaning."

It should also be noted that students in the control groups generally gave positive results on course evaluations as well. Since the control groups' classes did not have a focus on metaphor, they completed evaluations with more general questions taken by all students in the English program. Overall, the control groups also felt that the classes helped them improve their English, liked the class materials, and were satisfied with the course instructor. In other words, while students were receptive to the metaphor classes, they were also positive about all their English classes in general.

3.7 Summary of results

Overall, students who took the metaphor classes showed modest improvements in some specific areas of metaphor use. First, the students who took the metaphor class did not show significant improvements over the control groups on the reading and listening comprehension post-tests targeting passages with metaphor. The students did, however, show some improvement in identifying and interpreting metaphors on the metaphor awareness test and the metaphor interpretation task, suggesting that the classes may have helped raise students' metaphor awareness as well as developed their metaphoric competence. With regard to writing skills, the EFL students who took the metaphor classes showed a slight increase in metaphor use, particularly for similes, on the post-test, and the ESL experimental students similarly showed higher rates of metaphor use on the post-test than the control group. On the speaking videos, both the EFL and ESL students who took the metaphor class showed improvements in the use of metaphor to tell descriptive narratives and accurately describe a graph. Nevertheless, it was also noted that language errors in metaphor, such as miscollocations, incorrect idioms, and L1 transfer appeared in both the writing and speaking samples. Finally, whether the instruction took place in an EFL context or an ESL context did not have a significant impact on the results of the

metaphor instruction; rather, it was suggested that task type, topic, and input material were more likely to influence metaphor and metonymy use than whether students were studying in an EFL or an ESL classroom.

Next, it was noted that students commonly used SIGHT metaphors and TIME metaphors on the writing and speaking tasks. SIGHT metaphors were most commonly used to describe others' opinions, while TIME metaphors were most frequently used in speaking, particularly on the graph and narrative task, and used less in writing. Furthermore, it was found that the participants as well as the native speakers in this study rarely used TIME metaphors of motion, more often expressing ontological metaphors conceptualizing time as a place or other concrete object. Although the students used SIGHT and TIME metaphors without explicit instruction on these conceptual metaphors, they also made some errors linguistically expressing them in English; therefore, it was suggested that teachers might want to focus on collocations, idiomatic expressions, and phrasing for students to further develop their metaphoric competence in the L2 and avoid cross-linguistic transfer even if they are already familiar with a particular conceptual metaphor.

Finally, comments and feedback on course evaluations showed that students were generally receptive to the metaphor classes and considered them to be useful for developing their English skills. However, the students seemed less confident in their abilities to use English for productive rather than receptive skills, despite the fact that they did not improve on the comprehension tests. Still, the overall results of the study suggest that explicit metaphor instruction can be somewhat beneficial for students to develop their metaphor awareness, metaphoric competence, and overall language competence in a second language.

4. Discussion

This study has examined the effects of metaphor instruction on language students in both an EFL and an ESL context. Participants received three metaphor lessons for each of the four skill areas, with pre-tests and post-tests to determine the effects of the teaching methods. Overall, the metaphor instruction was found to have a modest effect on the participants' metaphor awareness and metaphoric competence for both receptive and productive skills, as analyzed in the previous section. In addition, it was found that students' use of metaphor and metonymy varied by task type, topic, and input material. The findings have implications for both language teachers and metaphor researchers, discussed in the sections below.

4.1 Implications for language teachers

Since this study investigated the effects of explicitly teaching metaphor in the four skill areas in both an EFL and an ESL context, its findings have a number of implications for language teachers. The main implication is that since different genres require different types and amounts of metaphor and metonymy, teachers should adapt their focus on metaphor and metonymy to the requirements of specific communicative tasks rather than searching for one "best approach" to teaching metaphor and metonymy. Another implication of the study is that at least a modest amount of metaphor instruction should be incorporated into the language curriculum since students are likely to make language errors when using metaphor and because metaphoric competence is an important component of communicative competence as a whole. Moreover, it is important to examine real language data when deciding how and what to teach as the focus of both textbook publishers and researchers can be misleading.

Along with these implications, it should also be acknowledged that teachers face a number of challenges incorporating metaphor and metonymy instruction into the language

classroom. This is not to suggest that teachers should forgo metaphor and metonymy instruction, but rather to acknowledge the difficulties of applying linguistics research to materials development and classroom instruction. These challenges, along with the potential benefits, should be taken into consideration when teachers decide if, how much, and what types of metaphor and metonymy to incorporate into the language curriculum. Each of the three main teaching implications along with specific challenges teachers may face implementing them will be discussed in more detail below.

4.1.1 Adapt metaphor and metonymy instruction to specific communicative tasks

The main teaching implication of this thesis is that teachers should adapt their metaphor and metonymy instruction to specific communicative tasks since different tasks require different types and amounts of metaphor and metonymy. In other words, rather than searching for one "best approach," to teaching all metaphor and metonymy, teachers should adopt different approaches for different tasks. Sometimes, this may conflict with teachers' intuition. For example, traditionally, language teachers who want to teach metaphor in the classroom have focused on creative metaphor in tasks like written narratives or poetry. However, the results of this study show that narrative tasks appear not to require as much metaphor, so it is not as important for teachers to focus on creative metaphor when teaching them, especially in a general English course. In contrast, some genres and task types, such as the graph description task, appear to require more metaphor than teachers might realize, meaning that teachers might want to focus more on metaphor when teaching these tasks instead.

In this study, narratives (both written and spoken) were found to elicit the smallest amount of metaphor and metonymy from the L2 students. Metaphor and metonymy use as measured by the MIP/MIPVU was found to range from 5.9% - 10.5% on the narrative writing

task and from 2.3% – 5.9% on the narrative speaking task. In contrast, metaphor and metonymy use as measured by the MIP/MIPVU was found to range from 12.3% to 18.9% on the written summary/responses and from 10.2% - 20.2% on the graph description task. Even for the native speaker samples used for comparison in this study, spoken narratives elicited a metaphor and metonymy frequency of only 4.4% with no creative metaphor use. In fact, most of the language in the narratives was very literal, describing physical things the participants had seen or done. All of this suggests that a more effective approach to teaching metaphor or metonymy for narratives would be to focus on everyday conventional metaphors like idioms or phrasal verbs rather than devote a lot of class time to more creative metaphor use.

In contrast, the summary/response writing task was found to elicit metaphor and metonymy frequencies of 12.3% - 18.9%, or almost double the metaphor and metonymy use of the narrative writing task. Moreover, the pre-test and post-test articles contained total metaphor and metonymy frequencies of 9% - 17.6%, including a number of idiomatic expressions, culturally opaque phrases, personification, and metonymy that could all be challenging for L2 learners. Furthermore, on the summary/response writing task, conventionalized metaphorical and metonymic expressions taken from news articles accounted for up to 21% of the total metaphor and metonymy used in the ESL students' writing samples. In other words, to successfully complete this type of task, students need to be able to understand and interpret metaphorical and metonymic expressions in the article as well as use them in their own writing. As a result, metaphor and metonymy instruction focusing on writing effective summary/responses could concentrate on first identifying and understanding metaphor and metonymy in reading passages and then on appropriately transferring expressions to the students' own writing. In this way, the metaphor and metonymy instruction would be targeting the specific task of writing

summary/responses rather than representing a general or theoretical approach to teaching metaphor.

In addition, with regard to speaking, the graph description task was found to require more metaphor than the discussion task, which required more metaphor than the narrative task. Moreover, student narratives were found to contain more similes while the graph description task elicited more personification. Therefore, teachers should consider how much they should focus on metaphor and what kinds of metaphor to target when designing lesson plans since different genres require different types and amounts of metaphor. This also applies to the topic of texts as an academic journal article on the environment will have different types and amounts of metaphor than an academic journal article on the economy. If teachers are able to target appropriate metaphor use for different fields, genres, and task types, they should be able to develop better lesson plans and materials for targeting metaphoric competence. One example is the graph description task. In this study, it was found that motion verbs, adjectives, and adverbs accounted for up to 29% of the metaphor used in native speaker samples and up to 18% of the metaphor used in the student videos. If teachers focus on these expressions when teaching students how to describe and discuss graphs, students will be able to learn appropriate metaphorical expressions for presenting graphs academically. This shows that by analyzing specific speaking tasks for metaphor and targeting those metaphorical expressions, teachers can create focused lessons for teaching metaphor in an academic context.

A final example is the discussion task. For this task, the topic of the discussion was found to influence the amount of metonymy the students used. That is, questions that contained metonymy themselves, focused on a political topic, or involved corporations tended to encourage more metonymy use than other discussion questions. This suggests that even within a specific

communicative task, teachers may want to adjust their instruction to specific topics or subjects. Similarly, on the discussion task, metaphor was used relatively infrequently to structure arguments by both the students and the native speakers sampled in this study; instead, metaphor was most frequently used in collocations, personification, or more topic-specific phrases and vocabulary. As a result, for some tasks, teachers may want to focus on subject-specific metaphor and metonymy rather than the use of metaphor and metonymy to accomplish a specific communicative function.

While this section has focused on the need for teachers to tailor metaphor and metonymy instruction to specific communicative tasks, it should be acknowledged that this can be challenging. First, it can be difficult to find suitable and appropriate authentic material to target metaphor and metonymy for specific task types, genres, and topics. As discussed in the literature review, insufficient coverage of metaphor and metonymy in English language textbooks (Alejo González et al, 2010; Littlemore & Low, 2006a) means teachers who are interested in developing their students' metaphoric competence must look to sources outside of the textbook for classroom materials. While this study used newspaper articles and TED talks as authentic sources of everyday metaphorical expressions like phrasal verbs, collocational patterns, idiomatic expressions, and personification, it is not always easy to find an appropriate reading or listening source for students' English proficiency level. In addition, although it is a good idea to choose articles or videos with the same genre and topic as students' productive tasks so that these sources can serve both as language input and as a model of appropriate metaphor use for when students perform the task on their own, it can be difficult to find appropriate reading and listening sources for each genre and task type. For example, if a teacher wants their students to have a discussion on climate change, rather than just find an academic lecture or an educational

video explaining climate change, the instructor might want to look for an informal discussion among native speakers that includes both task and topic specific metaphorical language. However, debates on news programs tend to feature speakers heatedly shouting at one another while formal debates among scientists might be above the level of a general English class. In other words, finding appropriate reading and listening source materials can be a daunting task for teachers who want to incorporate more metaphor and metonymy instruction targeting specific communicative tasks into their language classes.

Another problem is a lack of information. As little research has been conducted on the relationship between how different tasks affect how much and what kind of metaphor and metonymy is used, language teachers simply may not know how to tailor metaphor instruction to specific communicative tasks. This was the case in this study, as written and spoken narratives were originally chosen for instruction since it was believed that they would necessitate creative metaphor use. Another example from the discussion task is class instruction on using metaphor to structure arguments. It was later found that using metaphor to structure arguments was not actually as prevalent or necessary for discussion tasks as initially believed. Moreover, teachers do not receive training on how to teach metaphor and metonymy and may not be familiar with cognitive linguistics concepts, principles, or research themselves. More research, especially if it is incorporated directly into language textbooks, could help teachers close this gap. In the meantime, a lack of data, training, and materials makes it difficult for teachers to incorporate task-specific metaphor instruction into the language curriculum.

4.1.2 The need to incorporate metaphor instruction into the language curriculum

Another implication of this study is that teachers may want to consider incorporating more metaphor instruction into the curriculum in either an EFL or an ESL context. First, while

the type and frequency of metaphor varies by task so that some genres contain more than others, it is still very common in language, including in academic contexts. In this study, metaphorically related words accounted for 9% - 17.6% of the total words in the newspaper articles used for the standardized summary/response tests at an Intensive English Program in the United States, meaning that being able to understand, interpret, and use metaphor is essential for students' academic success. Indeed, Steen et al. (2010a, 2010b) estimate that about 13.6% of all discourse is composed of metaphorically related words, meaning that, on average, one in every seven and a half words, or about one word in every clause, is metaphorically related. Even though metaphor appeared less frequently on the narrative tasks in this study, it is still necessary to incorporate into other tasks, topics, and activities within the language curriculum as the ability to understand, interpret, and use metaphor is an important component of communicative competence.

Furthermore, metaphor should be explicitly taught because it poses additional challenges for language learners. Even with explicit instruction of metaphor, students in the experimental groups in this study did not always improve on the reading and listening post-tests. Moreover, while the students improved on the metaphor awareness post-test, students still misidentified some metaphorical expressions as literal and vice versa. Similarly, Littlemore (2001c) found not only that over 80% of difficult language students encountered in lectures was metaphorical, but also that students could misinterpret the meaning of metaphorical expressions even when they understood the meaning of each individual word (p. 337). This shows that students may need more explicit metaphor instruction to overcome the linguistic, cultural, and cognitive challenges of understanding metaphorical expressions to develop both their metaphor awareness and metaphoric competence in their L2.

In addition, teachers might consider focusing on classroom activities that also help students practice using metaphor in productive tasks. One reason for this is that students often use metaphor incorrectly in their L2. For example, in this study, language error in metaphorically related words comprised an average of 0.4% - 0.8% of students' written samples, accounting for 2.5% - 14.5% of the total metaphor and metonymy, while language error in metaphor ranged from 0.2% - 1.5% of students' spoken samples, or 1.8% - 28% of the total metaphor and metonymy. That is, even though the overall frequency of language error in metaphorically related words was low, much of the total metaphor used by the participants contained some kind of language error. These errors consisted mainly of miscollocations, L1 transfer, or incorrect word choice, showing that students need more practice with metaphorically related words in their L2. This is in line with research by Littlemore et al. (2014) which showed that learners' metaphor error rate was higher than the overall error rate in their writing (pp. 139-141). Similarly, Kathpalia and Carmel (2011) found miscollocations in 88% of student papers and conclude that metaphorical errors of ELLs detract from their writing abilities (p. 281). Moreover, as metaphor can add to textual competence, illocutionary competence, and sociolinguistic competence (Kathpalia & Carmel, 2011), learning to use metaphors more appropriately and accurately can improve students' overall language abilities.

Likewise, metaphor and metonymy instruction is important since metaphor and metonymy are used to accomplish specific communicative functions in language. For example, the reading lessons included a focus on metonymy in newspaper headlines as it allows writers to shorten their titles, while the listening lessons incorporated a discussion of song lyrics, which include metaphor to add imagery and interesting details to the song. Indeed, it would be difficult to discuss the economy without using personification or to understand a reading or listening

passage if you took every word literally. As Littlemore and Low (2006a, 2006b) have shown that metaphoric competence contributes to every component of Bachman's (1990) model of language competence, class time spent on metaphor and metonymy could contribute to students' overall communicative competence in the L2 as well.

Finally, before the study, it was unclear how an EFL context versus an ESL context would affect the results of the metaphor instruction. It was hypothesized that the ESL students would benefit from increased metaphorical input through interaction with the target language community while it would be easier to plan metaphor classes for a homogenous group of EFL students. In the end, both groups of students showed modest improvement, regardless of the learning environment. In addition, both groups of students gave positive feedback on end of course surveys, showing that they valued the metaphor instruction and had positive attitudes towards studying metaphor in the language classroom. These results suggest that metaphor instruction can be somewhat effective in either an EFL or an ESL context.

Despite the implication that metaphor and metonymy instruction should be included in the language curriculum, it must also be acknowledged that developing class materials and lesson plans to target metaphor and metonymy in specific tasks, genres, and topics is neither simple nor straightforward. If metaphor researchers who have been studying conceptual metaphors for years cannot agree on how to label and identify a specific conceptual metaphor in a particular passage, how can language teachers be expected to identify, understand, interpret, and teach metaphor based on CMT? Authentic passages contain a mixture of different metaphors, metonymy, idioms, personification, similes, and other figurative language, so it can be difficult to decide which expressions to focus on or even how to interpret particular expressions. This may be especially true for non-native language teachers, who might still be

developing their own metaphor awareness and competence in the L2. While some features, such as metaphor visibility, students' lack of knowledge of the source domain, or frequency and usefulness of expressions, can help in selecting metaphorical and metonymic expressions to target, teachers may still struggle with developing appropriate classroom activities for the selected expressions, task types, topics, and genres. Moreover, how language proficiency level might influence the effectiveness or appropriateness of metaphor instruction is uncertain. This thesis, like many other metaphor studies, examined the effects of metaphor instruction on advanced L2 learners; thus, it is not clear how metaphor instruction would be received by basic or intermediate students of English. This means language teachers who teach students with lower English proficiency levels have little guidance from the literature when it comes to integrating metaphor and metonymy instruction into their own classes. In the end, as there is no "best" way to teach metaphor, as appropriate metaphor and metonymy instruction should be tailored to specific tasks, topics, and genres, and as few effective teaching materials exist for teaching metaphor and metonymy, teachers may struggle with incorporating metaphor and metonymy instruction into their language classes.

4.1.3 Create lesson plans and materials based on authentic, naturally occurring language

Developments in corpus linguistics over the last few decades have shifted the focus from more theoretical ideas based on researchers' intuition to analysis of large databases of language for frequency and authentic language use, yet this approach is not always taken when it comes to cognitive linguistics, metaphor research, and language teaching. With respect to metaphor, language teachers should base their curriculum and classroom activities on real language use in authentic contexts rather than on intuition alone. One example already discussed above is

creative metaphor use in spoken and written narratives. Although intuition would suggest that narratives contain a high frequency of metaphor and similes to describe and add details, none of the native speaker samples of narratives used for comparison with the L2 narratives in this study contained any instances of creative metaphor use. Therefore, when teachers focus on creative metaphor for narratives, they are ignoring the actual language data, which suggests that speakers do not use a large amount of creative metaphor to tell everyday stories.

Another example from this study is TIME metaphors. While many CMT researchers have suggested that TIME metaphors involving motion are very prevalent in English (Boers, 1996; Kövecses, 2010; Moore, 2014; Shinohara and Pardeshi, 2011), the students in this study rarely used TIME metaphors of motion, especially time moving metaphors. This trend also held true for the native speaker samples, in which around 86% of the TIME metaphors were non-motion and which included only one example of a time moving metaphor. This raises the question of whether classroom time focusing on ego moving metaphors and time moving metaphors would be well spent, considering that more than 91% of the TIME metaphors students used on the speaking tasks and 96% of the TIME metaphors students used on the writing task were non-motion metaphors. While frequency is not the only consideration for sequencing and developing a language curriculum, it is one of the most important criteria as teachers want to focus on teaching the most common, productive, and useful phrases for L2 learners. As a result, even if a conceptual metaphor appears in academic research, teachers should consider how common, frequent, or productive it is when deciding how much, if any, class time to devote to teaching it.

In contrast, metaphor occurred at a high frequency in the graph description task, which might go against the intuition of some language teachers. For example, motion verbs occurred an average of 9 times and motion adjectives/adverbs an average of 3 times in each native speaker

sample in this study, for a total of 5.9% of the lexical units used in the graph description task. Language teachers might intuitively focus on other aspects of graphs, such as practicing numbers and years, and ignore these metaphorical expressions, yet the results of this study show that by focusing on teaching motions words and metaphorical language for graphs, teachers can prepare their students to speak more naturally and fluently. This example, along with the other examples above, shows why teachers must check their intuitions against real language data.

While it is important to rely on authentic language data when developing metaphor instruction, it may be impossible for language teachers to apply this principle to every communicative task. First, not only can research and intuition be misleading, but also there just is not enough information about how different task types, genres, and topics influence effective metaphor and metonymy use on specific communicative task. Although this thesis aims to close this gap, it only investigated three separate speaking tasks and two distinct writing tasks; therefore, teachers may struggle with developing materials and lesson plans for other tasks due to a lack of data. Furthermore, even if language teachers are able to both select appropriate reading and listening passages and prepare well-designed lessons using cognitive linguistics research, there is no guarantee that their students will show significant progress in metaphor awareness and metaphoric competence. In this study, students did not show significant gains on the reading comprehension test, and metaphor and metonymy instruction did not always result in a higher frequency or more effective use of metaphor and metonymy in productive tasks, as seen on the EFL students' written and spoken narratives. As discussed in the literature review, metaphor and metonymy are complex topics for instruction, with various linguistic, cognitive, and cultural factors influencing the effects of instruction of particular expressions on individual students. Ultimately, as Littlemore and Low (2006a) acknowledge, despite the teacher's best efforts, there

may be some students who "just don't get it" (p. 80). While this is not to suggest that teachers should abstain from teaching metaphor and metonymy altogether, it is important for teachers to be realistic both about the challenges they might face integrating metaphor instruction into the language curriculum as well as the possible outcomes of doing so.

4.2 Implications for researchers

In addition to the implications for teachers, the results of this study offer a number of insights for metaphor researchers. One implication is that researchers need to focus on describing natural language data and ovoid overstating the claims of CMT. Another implication is that researchers should consider the limitations of using the MIP/MIPVU when comparing results, as well as consider focusing on other categories of metaphor for deeper qualitative analyses. These implications will be discussed in more detail below.

4.2.1 Use authentic data to avoid overstating the claims of CMT

One implication from this study is the need for researchers to analyze authentic language data carefully and avoid overstating claims made by Conceptual Metaphor Theory (CMT). Although some researchers today are starting to use larger corpora for metaphor analysis (see for example Deignan, 2005; Nacey, 2013), in the past, CMT was criticized for being developed through hand-picked examples and "informed guesswork" (Kövecses, 2011, p. 24; Littlemore & Low, 2006a, pp. 13-14; Picken, 2007, p. 44). Indeed, the considerable systematicity suggested by CMT might encourage metaphor researchers to overstate or exaggerate their claims. For example, a number of researchers have suggested that TIME metaphors involving motion are common in English (Boers, 1996; Kövecses, 2010; Moore, 2014; Shinohara & Pardeshi, 2011). While there are many expressions in English that can be classified as ego moving metaphors or time moving metaphors, in this study, the vast majority of both native and non-native speakers'

TIME metaphors were ontological metaphors representing TIME as a concrete substance. In fact, since less than 1% of all TIME metaphors were time moving metaphors, whether the moving ego versus moving time dichotomy (Boers, 1996; Kövecses, 2010; Moore, 2014; Shinohara & Pardeshi, 2011) is even relevant is questionable. Moreover, as ontological metaphors of time accounted for 86% - 96% of all TIME metaphors in this study, it would be more logical for researchers to focus on TIME's ontological representations rather than metaphors of motion.

One reason for the discrepancy between the TIME metaphors found in this study and the TIME metaphors found by other researchers may be that the systematicity of metaphor and thought proposed by CMT has caused researchers to overextend specific expressions to fit the tenants of the theory. For example, Boers (1996), Graf (2011), and Shinohara and Pardeshi (2011) all count "before" and "after" as representations of moving time TIME metaphors by conceptualizing TIME as a path. However, when consulting the MEDAL, as stipulated in the MIP and MIPVU procedures for coding metaphor, the first entries for "before" and "after" are related to time, as shown in the table below. While the MIP and MIPVU require the researcher to choose the most basic meaning of a word by selecting the meaning that is more concrete, it seems like a stretch to choose the physical sense of "before" and "after" when the time meaning is so common and prevalent. In addition, while "before" and "after" could potentially invoke ego-moving metaphors, in most cases they do not. For example, common phrases like "before tomorrow" or "after that" do not invoke a sense of motion down a path in the way that "The golden age is before us," might. This suggests that in most contexts, "before" and "after" do not have clear metaphorical senses.

Table 56: First three entries of "before" and "after" in the Macmillan Dictionary for Advanced Learners

Before	After
1. earlier than something a. earlier than a particular time, event, or action b. at a time in the past c. used for saying how much time passes until something happens 2 used for saying that Something happens that prevents someone from doing what they intended 3 used for warning someone that something bad may happen unless they do something	1. at a later time a. when a particular time has passed, or when an event or action has ended b. used for showing how much later something happens 2. at a later position in a list or piece of writing a. following someone or something else in a list or order b. following something else in a piece of writing 3 farther along a road, railroad, etc

Instead of focusing on listing and categorizing conceptual metaphors to prove the systematicity of human thought and language, researchers should examine real language data in context to see how metaphor is actually being used. Consulting the dictionary and determining that the physical sense of a word is always the basic sense might be misleading, and when words in a sentence differ from their most basic sense, it is important to look at the context. For example, if someone says "before noon" or "after lunch," the meaning in the context of the sentence is probably temporal or ordinal, without a strong emphasis on ego moving TIME metaphors. In contrast, if someone told a recent graduate that "your future is before you," the speaker would be invoking a physical sense of "before" that would indicate an ego moving TIME metaphor. These examples show how important it is to examine the context of each lexical unit individually to decide whether it is metaphorical instead of trying to fit it into a preconceived conceptual metaphor.

4.2.2 Considerations when using the MIP and MIPVU

Another implication for metaphor researchers relates to the use of the MIP and MIPVU for identifying metaphor. As a method for identifying metaphorically related words, the MIP and MIPVU are fairly reliable. In fact, in this study, two raters using a modified version of the

MIP/MIPVU on both spoken and written data agreed on whether a lexical unit was metaphorically related over 96% of the time. Moreover, the VU Amsterdam Metaphor Corpus acts as a valuable resource for checking borderline cases, making the process even more dependable. Yet, there was still disagreement among raters in certain cases. For example, in this study, the two raters coded "feeling" differently, with one rater considering "emotion" to be its basic sense so coding it as non-metaphorical and the other coder considering a feeling to mean "something that you feel physically in your body," and thus coding it as a metaphor related word. As with the previous discussion of "before" and "after," it seems like a stretch to consider the basic meaning of "feeling" to refer to physical sensations rather than emotions; however, that would be the results of strictly applying the MIP/MIPVU procedure to the language data in this study. Other disagreements between the two raters revolved around specific categories; that is, while both raters considered a word to be metaphorically related, they disagreed about how to categorize the word. For example, one coder categorized "transmit" your feelings as a metaphor related word while the other coder categorized it as language error. These categories were added to the original MIP/MIPVU procedure in order to further analyze the specific types of metaphor taught in the metaphor classes, so this last example is not a criticism of the MIP/MIPVU itself. However, it still shows that metaphor identification poses challenges for researchers more generally. Overall, while the MIP and MIPVU appear fairly reliable and straightforward on the surface, there are certainly some challenges when applying them to real language data.

Indeed, MacArthur (2015) questions the assumption that using a dictionary, in particular the MEDAL, will enable researchers to confidently determine the basic, contemporary sense of a word for analysis as stipulated by the MIP/MIPVU, an issue that also arose in this study and that has already been discussed above in relation to the lexical units "before," "after," and "feeling."

She describes the frustrations she experienced using the MEDAL to analyze a conversation in which a lecturer and a student were discussing the student's written assignment about Oscar Wilde during office hours. As the lecturer used words like "say," "contradict," "tell," "argue," "talk," and "speak," Macarthur felt that clearly the lecturer was metaphorically framing the act of writing as an act of speaking. However, consultation with the MEDAL suggested that the first two of these verbs were not metaphorical, the next two were possibly metaphorical, and only the last two were definitely metaphorical, resulting in a somewhat incoherent and intuitively incorrect analysis of the dialogue. She concludes by criticizing the overall MIP/MIPVU procedure as the intense focus on word analysis can cause researchers to lose sight of the overall discourse, as well as the use of the MEDAL, which is a dictionary designed for language learners, not metaphor researchers. Likewise, Dorst and Kaal (2012) describe the case of looking up "pandora's box" and "artful dodger" in the MEDAL. The dictionary gives separate entries for each of these words, with an abstracted meaning and no explanation of the original literary source, meaning that these two expressions would be coded as non-metaphorical using the MIP/MIPVU. While acknowledging that most metaphor analysts would like to consider the original literary origins for these expressions as the most basic sense of the word and thus code them as metaphorical, Dorst and Kaal (2012) argue that on a linguistic level, these words should be coded as non-metaphorical to maintain the reliability of the MIP/MIPVU (pp. 65-66). These two researchers, then, appear to have opposite approaches to consulting the MEDAL for coding using the MIP/MIPVU, with MacArthur (2015) recommending a broader view of metaphor analysis with the MEDAL as a tool for extra consultation and Dorst and Kaal (2012) recommending strict adherence to the definitions within this particular source despite a researcher's contradictory knowledge about the metaphoricity of a particular lexical unit.

Clearly, even when using the MIP/MIPVU, there can be disagreements about the metaphoricity of specific lexical units and different approaches with regard to coding metaphor.

Furthermore, while the MIPVU groups metaphorically related words into direct, indirect, and implicit metaphor, researchers studying other types of metaphor may want to categorize metaphorically related words differently. Although coding for metaphor with the MIPVU is only the first step in metaphor analysis, researchers use this method to report on and discuss metaphor frequency; moreover, it is difficult to analyze something you have not identified. Researchers should develop reliable methods for testing other types of figurative language instead of only relying on the categories in the MIPVU. For example, Biernacka (2013) used the MIPVU and MIV as models to develop a procedure for identifying metonymy, enabling her to focus on metonymy instead of metaphor. As discussed in the methodology section, this study included language lessons focusing specifically on metonymy, simile, and personification in addition to metaphor; for this reason, metonymy, simile, personification, and language error were added to the category of metaphorically related words, facilitating both quantitative and qualitative analysis. For example, it was possible to analyze metaphor error to notice how students struggled with conventionalized figurative expressions and collocations. It was also possible to analyze students' use of similes on spoken and written narratives or their use of personification on the summary/responses and graph description task. Researchers who use the MIPVU for coding run the risk of focusing only on metaphorically related words and ignoring other interesting and productive categories of figurative language use.

Thus, it is recommended that researchers not only focus on more detailed analysis of other categories in addition to the general category of metaphorically related words, but also that procedures for identifying other types of metaphor continue to be refined to increase inter-rater

reliability. While the efforts of Biernacka (2013) in developing a procedure for coding metonymy are laudable, more methods and tools are needed for other types of figurative language as well. Further analysis of different types of metaphor may make it easier for researchers to move beyond overall metaphor frequency into deeper analysis of how and why different types of metaphorical expressions are used. With more refined coding methods, researchers could more easily carry out qualitative analysis of the function of metaphor on a larger scale, which could help teachers and researchers analyze whether students are learning to use metaphor more effectively in their second language. At the same time, however, the process of categorizing metaphorically related words still needs to be refined so that inter-rater reliability on distinct categories can be improved.

To sum up, the MIP and MIPVU generally lead to high inter-rater reliability and is fairly straightforward; however, researchers may still disagree about the metaphoricity of specific lexical units. Since discrepancies can arise even after consulting the MEDAL, these differences should be further discussed and resolved on a case by case basis among researchers, and it should be accepted that some degree of subjectivity will be inherent in any coding of real language data due to the nature of metaphor itself. In addition, since the MIP/MIPVU only identifies metaphor related words, it was suggested that researchers consider coding for other types of figurative language as well. However, this process still needs to be further refined to improve inter-rater reliability across multiple categories of figurative language use.

4.3 Limitations of the study

It should be noted that the results of this study were found with these specific study participants in this particular teaching context. While it is hoped that the results can inform best

practices for other teachers, how the teaching activities and materials used in this study might affect different students in other contexts is uncertain.

One limitation of the study was the sample size with only 10-12 students in each control and experimental group. A larger sample size might have yielded more statistically significant data over the course of the study. Another limitation of the study was the amount of time devoted to teaching metaphor. While the EFL students received 12 lessons for a total of around 15 hours of metaphor instruction, the ESL students were split into groups receiving only 6 lessons, or 7.5 hours of instruction. It is hypothesized that more dramatic results might have been observed with more hours of metaphor instruction.

Finally, although one strength of this study is that it used actual students in real academic programs, it also meant that logistical and practical considerations were another limitation of the research. For the EFL students, because there was only one Level 6 advanced English class in the entire university, the study had to be conducted with two different levels with different curricula: Level 5 and Level 6. While it would have been better to compare students from the same level studying the same curriculum, it was not possible in this context. For the ESL students, since the classes came from two different university sessions, the curriculum changed so that the test articles and activities in the regular classes were different for the two groups. Again, it would have been better to control for the curriculum, but the change in class content was mandated by the program's administration. In addition, due to the research being conducted with real students, it was impossible to control for every possible factor, such as years learning English or linguistic and cultural backgrounds. In other words, the realities of conducting research with actual students in real educational contexts can be considered a limiting factor on the results of this study.

4.4 Suggestions for further research

The initial results of the study suggest that explicit metaphor instruction based on cognitive linguistics research and conceptual metaphor theory can have a moderate, positive effect on students for some (but not all) types of tasks, particularly tasks like the graph description task. On the other hand, for tasks requiring less metaphor use, such as the narrative writing task, devoting a lot of class time to metaphor instruction may result in little improvement. Moreover, different amounts and types of metaphor and metonymy were found to be more important for some topics and tasks than others. For example, the ESL experimental group used more metonymy when writing about globalization than the ESL control used when writing about heroes. Further research is recommended to determine for which types and topics of reading, listening, writing, and speaking tasks explicit metaphor and metonymy instruction may be most effective and useful.

Furthermore, this research was conducted with a small group of EFL students at a public university in Ecuador and a small group of ESL students at a public university in the United States. Further research is recommended to determine whether this approach would be effective in other contexts with other groups of students as well. In particular, research should be conducted with students from other language and cultural backgrounds or in other EFL/ESL locations to determine the most effective contexts and conditions for using this approach. Furthermore, while the research in this study was conducted on students in advanced English classes, it would also be useful to test this teaching approach with lower level students to determine how much teachers can or should explicitly focus on metaphor at beginning and intermediate English levels.

In addition, there was no correlation between taking the metaphor class and improved scores on the reading and listening comprehension tests targeting authentic metaphor in reading and listening passages. Although participants in the experimental groups focused on authentic examples in reading and listening passages with worksheets and activities to highlight the use of metaphor in class, they were unable to transfer this analysis to new metaphor in the reading and listening passages on the post-test. It is unclear whether these results are due to the small number of reading and listening lessons, an issue with the post-test design, or some issue with the teaching method itself. Further research is needed to determine exactly why the participants in this study were unable to significantly improve their reading and listening comprehension scores, as well as what conditions and teaching methods might make this more likely.

Finally, some issues with the MIP and MIPVU were raised; namely, that even with the MIP and MIPVU there still continues to be discrepancies between raters and that the MIP and MIPVU do not categorize metaphor for further analysis. This study attempted to identify not only metaphor related words, but also cases of metonymy, personification, simile, and language error. Further categorization can lead to stronger qualitative analysis; however, in this study, more categories also led to less consensus among raters and a lower inter-rater reliability. This was particularly true for categories that occurred less frequently, making disagreements among raters even more likely to result in low reliability scores. More research is needed to determine how the MIP/MIPVU or other coding methods can be adapted to research questions that address issues beyond basic categorization of metaphorically related words.

4.5 Summary of Discussion

The results of this study have implications for both language teachers and researchers. First, as different tasks, topics, and genres require different types and amounts of metaphor and metonymy, it was suggested that language teachers adopt different approaches to different communicative tasks rather than search for one "best" method for teaching all metaphor and metonymy. In addition, although some tasks require less metaphor and metonymy than others, metaphoric competence is still an important component of language competence; therefore, language teachers might want to consider incorporating explicit metaphor instruction into the language curriculum in either an EFL or an ESL context. In addition, teachers should consider examining authentic language data to develop scaffolded teaching activities that will encourage metaphor production targeting specific communicative functions rather than rely on intuition alone. At the same time, it was acknowledged that incorporating metaphor instruction into the language curriculum poses some challenges; therefore, teachers should consider these challenges, along with the potential benefits, when considering how to incorporate metaphor and metonymy instruction into their language classes. Next, researchers should use authentic language data and avoid overstating the claims of CMT, as shown with the example of TIME metaphors. In addition, although at the current time, it seems to be the most reliable way to code for metaphorically related words, the MIP/MIPVU does have some limitations. It is suggested that researchers consider adding other categories and continue refining the coding process in order to investigate different aspects of figurative language.

Finally, the results of this investigation apply only to the participants and contexts of this study. Further research into the effects of explicit metaphor instruction based on cognitive linguistics research should be conducted with other participants and in other situations to

determine if this is an effective teaching approach for other contexts as well. In addition, further research is recommended to determine for which tasks and topics metaphor and metonymy instruction is more effective as well as to determine what conditions and teaching methods might have a positive effect on students' reading and listening comprehension of texts containing metaphor. Moreover, researchers should investigate ways of adapting the MIP/MIPVU or other coding methods to other types of figurative language analysis. Finally, considering both the prevalence and importance of metaphor awareness and metaphoric competence for communicative competence, more research is needed into best practices for both teachers and researchers.

5. Conclusion

Cognitive linguistics emphasizes metaphor and metonymy as prevalent components of everyday life, structuring human thought processes, perceptions, and conceptualizations (Lakoff & Johnson, 1980). For L2 learners, since metaphoric competence, or the ability to accurately interpret and use metaphor, is an integral part of language competence as a whole (Littlemore & Low, 2006a, 2006b), developing the ability to identify, understand, and produce metaphor is crucial for becoming fluent in a second language. Regardless of their linguistic and cultural backgrounds, language learners face linguistic, cultural, and cognitive challenges when confronted with or when trying to use metaphor and metonymy in their L2. The aim of the current study has been to determine whether explicit metaphor and metonymy instruction can help students begin to overcome these challenges and develop both their metaphor awareness and metaphoric competence in their L2.

During this study, a group of EFL students studying at a university in Ecuador and a group of ESL students studying in the United States received targeted instruction based on CMT, blending theory, and other cognitive linguistics research into "best practices" for teaching metaphor. The students received lessons focusing on metaphor and metonymy use in reading, listening, writing, and speaking, and the classes included explicit instruction and practice with metaphor, metonymy, personification, and simile. After instruction, the students' speaking and writing samples were coded for metaphor using a modified version of the MIP and MIPVU, and the results of all the pre-tests and post-tests were compared with the results of an EFL control group and an ESL control group of students who had not received the metaphor and metonymy instruction. Speaking and writing samples for all groups of students were rated by independent raters and further analyzed using both quantitative and qualitative research methods.

Overall, students who had taken the metaphor and metonymy classes made modest improvements in metaphor awareness and metaphoric competence in some specific areas. Although the experimental groups did not show significant improvement on the reading comprehension post-test, they did show some improvement on the metaphor awareness test and metaphor interpretation task. In addition, the ESL experimental group showed significant improvement on the listening comprehension test targeting metaphor in TED Talks. With regard to writing, while students who took the metaphor and metonymy classes did not significantly increase their scores on the writing post-test, they did increase some types of metaphor and metonymy frequency. For speaking, students who took the metaphor classes developed their abilities to use simile and descriptive metaphor in narratives as well as describe graphs using motion verbs, adjective, and adverbs. Still, as the overall improvements were relatively modest and as students continued to make a number of language errors when using metaphor on the post-test, teachers should not expect substantial gains after only a few classes.

While the metaphor and metonymy instruction had some effect on the types and frequency of metaphor and metonymy students used in their writing and speaking samples, it did not affect students' overall English scores. In other words, students who took the metaphor class were not more likely to improve general reading, listening, writing, and speaking scores than students who had not taken the classes. It was hypothesized that these results might be due to the relatively small number of metaphor and metonymy classes for each skill area, but more research could determine if more classes could have a greater impact on students' overall English skills. In addition, task type along with the amount and type of metaphor and metonymy in input material had a larger impact on students' metaphor and metonymy use than whether they had received metaphor and metonymy instruction or not. That is, both the type of writing or speaking

task and the reading or listening material students were exposed to affected their metaphor and metonymy use in written and spoken production more than receiving explicit metaphor instruction; therefore, it is recommended that metaphor and metonymy instruction be geared to more specific tasks rather than to explicit instruction on a more theoretical level.

The results suggest a number of implications for language teachers who want to incorporate metaphor instruction into their language classes. While much of the research discussed in the literature review offered general "best practices" or guidelines for instructors teaching metaphor, the results of this study suggest that metaphor and metonymy instruction should be adapted to more specific tasks. This is because the different tasks in this study were found to necessitate different types and amounts of metaphor and metonymy. In addition, it was suggested that teachers might want to consider incorporating more metaphor and metonymy instruction into the language curriculum in general as the classes in this study were found to have modest benefits and were well received in both an EFL and an ESL context. Furthermore, teachers might consider examining real language data when developing lesson plans and materials as conventional assumptions and attitudes towards metaphor may be inaccurate. For example, the study found very little creative metaphor use on either written or spoken narratives; therefore, teachers might consider emphasizing creative metaphor use on stories a little less and focusing more on teaching conventional metaphorical expressions such as phrasal verbs or idioms. Finally, it was acknowledged that teachers face a number of challenges incorporating metaphor and metonymy instruction into the language curriculum, and that these difficulties should be taken into consideration when deciding if, how much, and when to incorporate metaphor and metonymy instruction into the language classroom.

The study also revealed some implications for metaphor researchers. First, the research highlighted the need for researchers to focus on real language data in its specific context rather than overextend a preconceived theory like CMT, as shown with the examples of TIME metaphors. In addition, a number of criticisms of the MIP and MIPVU were discussed. Although they are the most reliable and accepted methods for identifying metaphor in academic research, actually applying the MIP and MIPVU to real language data can result in diverse coding and disagreements among researchers, due both to issues with the coding method and recommended dictionary (MacArthur, 2015) as well as to the nature of metaphor itself. In addition, it was suggested that methods for coding other types of metaphor should be further developed and tested so that researchers can make deeper analyses of other types of metaphorical expressions, such as personification or metonymy. While Biernacka (2013) has developed a method for identifying metonymy, few metaphor researchers have explored other ways of coding different types of metaphor, and inter-rater reliability was fairly low on the coding of personification, language error in metaphor, and metonymy in this study. As it is impossible to study what you cannot measure, developing more formalized tools and methods for identifying metaphorical and metonymic language could help researchers analyze different types of expressions in authentic language samples.

It was acknowledged that this study had a number of limitations as well. First, while one strength of the research was that it was conducted with real students in actual academic settings, this also led to some logistical issues that made the experimental and control groups less comparable matches for each other. In addition, the small sample sizes were another limitation of the study as the language programs at the two universities like to maintain a high teacher to student ratio. It is suggested that similar research be carried out with other students in different

contexts to determine how the effects of metaphor and metonymy instruction may differ. In particular, it would be beneficial to conduct research on the effects of teaching metaphor and metonymy for students of different proficiency levels, cultural backgrounds, and native languages as well as with other types of reading, listening, writing, and speaking tasks and topics to determine the most efficient techniques and most appropriate settings for implementing explicit metaphor and metonymy instruction.

Although this study focused on teaching metaphor in particular, some of its implications can be extended to other areas of teaching and research more generally. First, as has been shown in numerous corpus linguistics studies, the intuition of both teachers and researchers is often incorrect. For example, in this study, narrative writing and speaking tasks were chosen not only because it was believed that they would elicit a fair amount of creative metaphor use, but also because it was thought that greater simile and descriptive metaphor use on narratives would lead to improved scores; however, the results of the study indicated otherwise. Another example is the lesson targeting metaphorical expressions in discussions. It was later found that metaphorical expressions for expressing one's opinion are actually not as common in discussions as more conventionalized phrases for talking about a specific topic. Therefore, it would have been better for the discussion lesson to target metaphorical language on the discussion topic itself rather than metaphorical phrases for expressing an opinion. The same issue applies to researchers, who may intuitively feel that particular conceptual metaphors, such as TIME moving metaphors, are fairly common but cannot know for sure without checking actual language data. In order to continually develop their skills, teachers and researchers must constantly evaluate whether their assumptions about teaching or their research hypotheses are actually correct. This highlights the importance of action research for teachers and continual self-evaluation for researchers.

Another general implication of the findings from this study is that it can be difficult to appropriately apply linguistics research to the language classroom, particularly for teachers who want to use authentic source materials. Examples already discussed include motion metaphors of time and metaphorical phrases for expressing opinions. That is, while research might suggest that certain conceptual metaphors or phrases are particular important or productive, when teachers incorporate them into their lesson plans, they may find that these conceptual metaphors or phrases are actually less useful or effective than they had hoped. Another difficulty is the logistics of trying to apply CMT to language classes more generally. One reason that CMT has had less influence on the language classroom than perhaps it should have is that it is difficult to incorporate into actual lesson plans and classroom materials. For example, authentic reading or listening passages contain many different conceptual metaphors; it can be difficult not only for students, but also for both native and non-native language teachers to identify and explain all of them. Moreover, even if students identify conceptual metaphors in one passage, they will likely face a set of completely different conceptual metaphors in the next one. There are no comprehensive lists of conceptual metaphors and little information to indicate which conceptual metaphors are most useful for which tasks, which conceptual metaphors are most frequent, or which ones might cause the most problems for L2 learners; moreover, there are few teaching materials based on CMT. Therefore, it is not easy for language teachers to incorporate CMT into classroom materials. While this is only one example of how it can be difficult to apply linguistics research, theories, and concepts to actual teaching contexts, there will be other examples in other areas. Although teachers are criticized for not applying linguistics research to their professional development (Bartels, 2005), perhaps researchers might also be criticized for not making their research more accessible. Teachers and researchers might consider working together so that the

results of applied linguistics research are translated into best teaching practices, classroom materials, and teacher training.

Finally, one of the most significant findings from this study was both how important and how difficult it is for teachers to know where and when to focus on metaphor and metonymy. Not only is effective use of metaphor and metonymy heavily dependent on task type, it also varies by genre and topic. For example, in this study, metonymy was found to be important for some discussion questions but not for others; this adds a layer of complexity for teachers who must decide whether or not to include a focus on metonymy in lesson plans involving discussion. Moreover, not only can teachers' intuition be wrong, but textbook materials and metaphor research can be misleading. Furthermore, the interaction of linguistic, cultural, and cognitive factors in a mixed classroom of students from different backgrounds poses additional challenges for the language teacher. Still, the results suggest that language teachers who consider a variety of factors related to metaphor and metonymy in authentic language use might be able to develop effective lesson plans, classroom materials, and activities to improve their students' metaphor awareness and metaphoric competence on specific communicative tasks. While the current study has offered insights into metaphor and metonymy instruction for some specific reading, listening, writing, and speaking tasks, more research is needed to determine how and when teachers might want to focus on metaphor and metonymy for other tasks.

In conclusion, even though the metaphor instruction did not result in substantial improvement for some of the tasks in this study, the instruction certainly did not have a negative impact. The experimental students in both the EFL and the ESL context showed modest improvements on some of the post-tests, and both groups of students responded positively to the metaphor instruction on end of course surveys. Considering that students are open to metaphor

instruction, that metaphoric competence is an important component of language competence (Littlemore & Low, 2006a, 2006b), and that the students in the experimental group showed some improvements, incorporating metaphor instruction into the language curriculum can be both worthwhile and beneficial for students. By focusing on developing their students' metaphor awareness and metaphoric competence, teachers can improve their students' language abilities and ultimately, their communicative competence as well.

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Appendix A: Participant Consent Forms and Ethical Reviews

Participant Consent Form

I, the undersigned, declare that I am willing to take part in research for the project entitled: Using Cognitive Linguistics to Teach Figurative Language.

 I declare that I have been fully briefed on the nature of this study and my role in it and have been given the opportunity to ask questions before agreeing to participate.

 The nature of my participation has been explained to me and I have full knowledge of how the information collected will be used.

I give my permission for my pre-test and post-test data to be used solely for research purposes.

I understand that I must be videotaped in order to participate in this study and give my permission to be videotaped on the pre-test and post-test. No images or any other element that might identify me will be made public unless I sign below to give my permission for my videos to be shown for academic purposes.

 I fully understand that there is no obligation on me to participate in this study.

 I fully understand that I am free to withdraw my participation without having to explain or give a reason. I understand that I should withdraw my participation by the end of the last class of the semester if I wish to withdraw from this study.

 I am also entitled to full confidentiality in terms of my participation and personal details.

**By signing below you are agreeing to be part of the study.

Name:

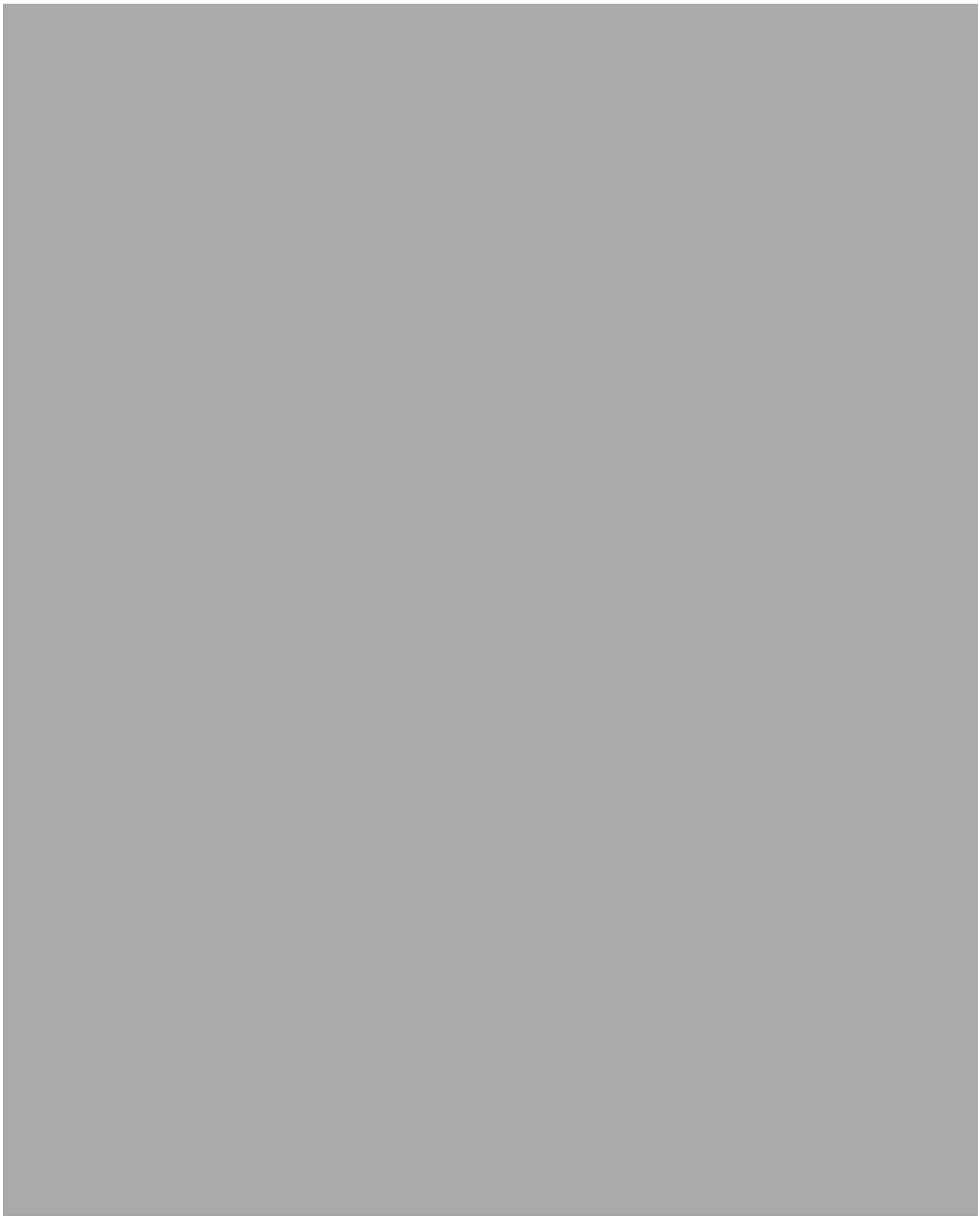
Signature: Date:

**I would also like to give my permission for my video to be shown at academic conferences, presentations, and in academic journals. By signing below you are agreeing to have your videos shown solely for academic purposes.

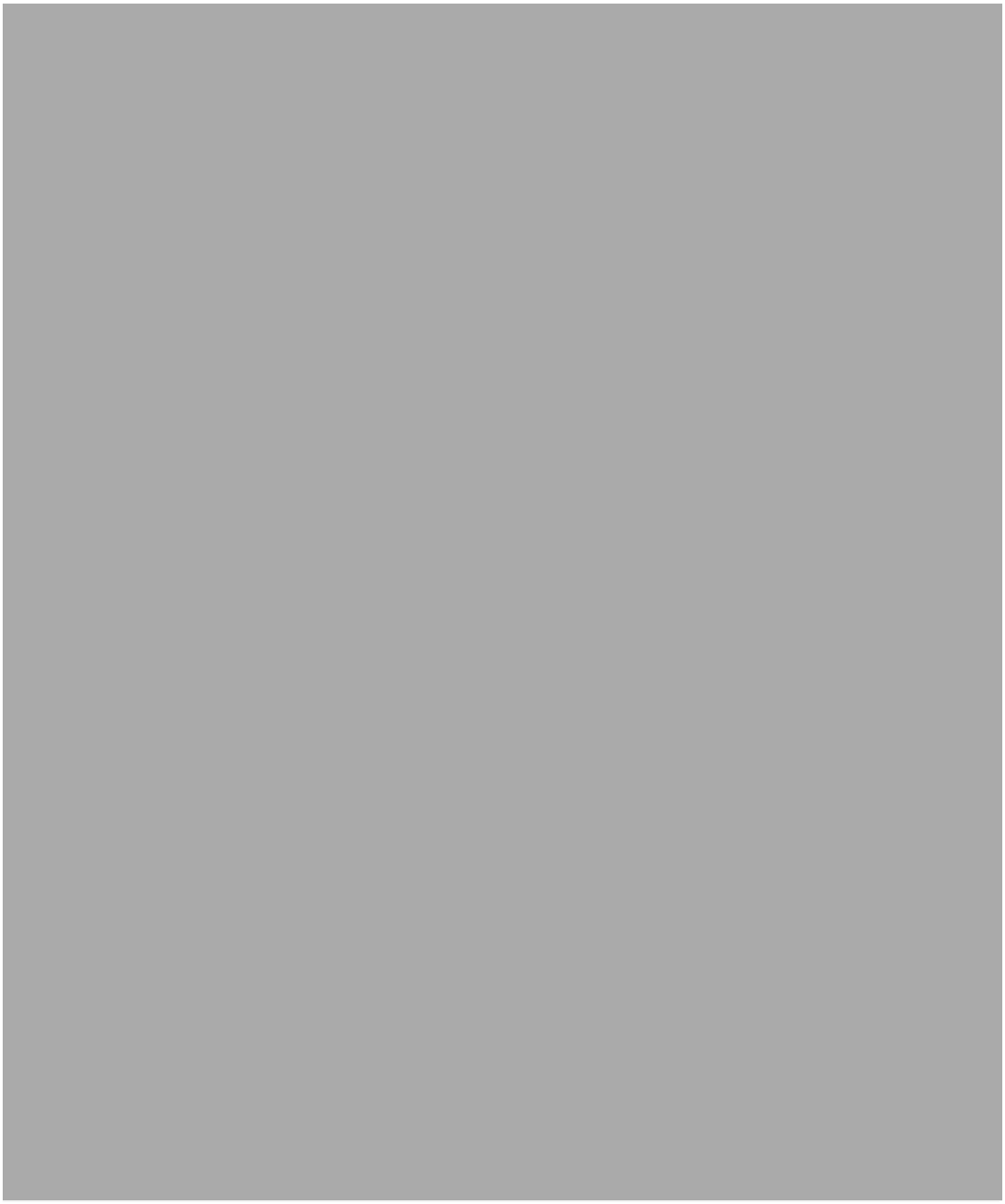
Name:

Signature: Date:

Ethical Review: University of Birmingham



Ethical Review: Arizona State University



Appendix B: Pre-Test

Pre-Test: Figurative Language

Part 1: Listening: Watch the videos and answer the questions below.

Mark Bittman, "What's Wrong with What We Eat, 0:00 – 1:23

1. What does the speaker compare with the cow?

a. a vegetarian
b. President Nixon
c. global warming
d. a nuclear bomb

2. Why does the speaker make this comparison?

a. He is a vegetarian who doesn't like cow meat.
b. He thinks cows are aggressive and dangerous animals.
c. He thinks the future could be disastrous if we don't change our eating habits and start conserving more resources.
d. He thinks that beef is becoming really popular as beef consumption continues to increase throughout the world.

3. When the speaker refers to global warming and says that even "President Bush has seen the light," what does he mean?

a. After denying the effects of global warming for a long time, President Bush has finally accepted scientific proof of global warming.
b. President Bush has always been a strong supporter and leader in writing laws to combat the effects of global warming.
c. President Bush believes in global warming due to his strong religious ties.
d. President Bush has always believed that global warming doesn't really exist and will never change his mind.

Johan Rockstrom, "Let the Environment Guide Our Development," (0:00-2:21)

4. What does the speaker mean when he says, "business as usual is not an option?"

a. businesses must come up with innovative new ideas in today's competitive marketplace
b. old-fashioned businesses are not successful, so they must change the way they do business
c. we're facing huge planetary risks so everyone around the world must change the way they live and work to become more environmentally sustainable
d. businesses cause all of our environmental problems, so only businesses need to change to become more environmentally sustainable

5. Why does the speaker bring an inflatable globe of the world on stage with him?

a. to represent how strong and resistant to change the world is
b. to point out different cities he mentions during his talk
c. to identify which countries are the most environmentally friendly
d. to represent the Earth as a silent stakeholder in environmental negotiations

6. Why does the speaker say, "It was a jumpy ride"?

a. the temperature and conditions on Earth fluctuated a lot
b. there were a lot of mountains and hills on Earth
c. there was a long period of stability throughout the Earth's history
d. humans first started to jump during the Halocene phase

Johan Rockstrom, "Let the Environment Guide Our Development," (2:21-5:16)

7. Why does the speaker say we're putting a "quadruple squeeze" on the planet?

a. because ecosystems contain an element of surprise and don't behave predictably and linearly
b. because he identifies four factors that put pressure on Earth's resources and sustainability
c. because population growth in four different regions of the Earth are requiring more and more resources
d. because the polar ice caps are melting, which will make sea levels rise

8. Why does the speaker sit on the inflatable globe during his talk?

a. he's tired of walking around stage
b. to represent the destruction of the world's polar ice caps and arctic regions
c. to represent high levels of greenhouse gases
d. to represent the enormous pressure humans place on the environment and world resources

9. What does the speaker mean when he says "we may have come to the point where we have to bend the curves?"

a. we've entered the period when we must reverse our current trends to reduce our impact on the environment
b. it's okay to continue accelerating our use of world resources and pollution
c. we should just focus on reducing the rate of deforestation to stabilize all ecosystems around the world
d. all countries should work together to reduce the atmospheric CO2 concentration

10. What is the main idea of the speaker's talk?
a. the biggest problem facing the world today is melting ice caps which will lead to rising sea levels

b. the 20% richest part of the population is causing most of today's environmental probems
c. ecosystems are fragile and unpredictable, since they can tip over and be destroyed easily they must be protected
d. our current way of life is putting too much pressure and strain on the planet and is unsustainable, so we must make global changes

Part 2: Reading

A) Directions: Read the article below and answer the questions.

Dark Days for Green Energy

Wind and solar power have been growing at a blistering pace in recent years, and that growth seemed likely to accelerate under the green-minded Obama administration. But because of the credit crisis and the broader economic downturn, the opposite is happening: installation of wind and solar power is plummeting.

Factories building parts for these industries have announced a wave of layoffs in recent weeks, and trade groups are projecting 30 to 50 percent declines this year in installation of new equipment, barring more help from the government.

Prices for turbines and solar panels, which soared when the boom began a few years ago, are falling. Communities that were patting themselves on the back just last year for attracting a wind or solar plant are now coping with cutbacks.

"I thought if there was any industry that was bulletproof, it was that industry," said Rich Mattern, the mayor of West Fargo, N.D., where DMI Industries of Fargo operates a plant that makes towers for wind turbines. Though the flat Dakotas are among the best places in the world for wind farms, DMI recently announced a cut of about 20 percent of its work force because of falling sales.

After years when installers had to badger manufacturers to ensure they would receive enough panels, the situation has reversed. Bill Stewart, president of SolarCraft, a California installer, said that manufacturers were now calling to say, "Hey, do you need any product this month? Can I sell you a bit more?"

Comprehension Questions:

1. What is the main idea of the article?

a. Solar and wind energy are not the most efficient sources of energy in the United States.
b. President Obama does not support efforts to develop green energy in the United States.
c. Although demand for green energy had been growing rapidly in the past, sales have decreased in recent months.
d. Prices for turbines and solar panels are falling.

2. According to the author, what is the outlook for green energy in the next few years?

a. Although prices have fallen recently, the solar and wind energy industries will be able to improve quickly in the next few months.
b. There will be a lot of competition for green energy as more communities want to attract wind or solar plants.
c. The government will help support green energy industries.
d. The future does not look bright for green energy industries as both prices for materials and demand for green energy have fallen in recent months.

3. What does Rich Mattern mean when he says he thought the green energy industry was "bulletproof"?

a. He thought the green energy industry would continue to thrive and wouldn't be affected by economic problems.
b. He thought the green energy industry would be unpredictable and unstable.
c. He thought the green energy industry would be unsafe and full or spies.
d. He thought the green energy industry would be sustainable and good for the environment.

4. In the following sentence, what does "patting themselves on the back" mean?
"Communities that were patting themselves on the back just last year for attracting a wind or solar plant are now coping with cutbacks."

a. trying to get air when you are choking
b. congratulating yourself for a job well done
c. criticizing yourself after making a mistake
d. taking care of yourself by giving yourself a treat

5. How has the demand for green energy changed over the last few months?

a. Demand for wind and solar power had been growing at a blistering pace, but now demand is plummeting.
b. Demand for wind and solar power had been holding steady, but now it's starting to soar and really take off.
c. Demand for wind and solar power had been coasting by, but now demand is plummeting.
d. Demand for wind and solar power had been growing at a blistering pace, but now it's starting to soar and really take off.

B) Directions: Read the article and answer the questions below.

Science Seeks to Unlock Marijuana's Secrets

As the once-vilified drug becomes more accepted, researchers around the world are trying to understand how it works and how it might fight disease.

As more and more people are turning to marijuana to treat ailments, the science of cannabis is experiencing a rebirth. We're finding surprises, and possibly miracles, concealed inside this once forbidden plant. Although marijuana is still classified as a Schedule I drug, Vivek Murthy, the U.S. surgeon general, recently expressed interest in what science will learn about marijuana,

noting that preliminary data show that "for certain medical conditions and symptoms" it can be "helpful."

Comprehension Questions:

6. What is the main idea of the paragraph?

a. Marijuana is still classified as a Schedule I drug and should be highly controlled.
b. Although people have had a negative view of marijuana in the past, scientists studying marijuana may find positive medical uses for it in the future.
c. Very few people are using marijuana to treat health problems because scientists don't know anything about the drug.
d. Marijuana can be help for certain medical conditions and symptoms.

7. Why does the author say "the science of cannabis is experiencing a rebirth"?

a. Scientists are showing more interest in researching potential medical uses for marijuana.
b. New strands of marijuana were recently discovered, creating a "rebirth" of the plant.
c. Marijuana is becoming more and more vilified since it's a Schedule 1 drug.
d. There is no interest in researching or using marijuana for medical purposes in the United States because marijuana is a Schedule 1 drug.

C) Directions: Read each scientist's quotes about marijuana (cannabis). Then answer the questions below.

Chemist	Doctor	Geneticist
"We have just scratched the surface, and I greatly regret that I don't have another lifetime to devote to this field, for we may well discover that cannabinoids are involved in some way in all human diseases."	"Cannabis is not a silver bullet—it doesn't work for everybody. But I'm impressed. It clearly can be a very effective treatment for many people."	"There's a certain pressure to map the genome of marijuana because this work will have huge implications, and anything we do in this lab will be under a lot of scrutiny. You can feel it. People are just wanting this to happen. Understanding cannabis's genome is like discovering some hidden motif deep in a piece of music. Through remixing, you can accentuate it and turn it up so that it becomes a prominent feature of the song."

Comprehension Questions

8. What does the chemist mean when he says, "we have just scratched the surface"?

a. You have to scratch the surface of the marijuana leaves when conducting research.
b. He knows almost everything about marijuana and its potential medical uses.

c. His research has just begun to reveal information about marijuana, and there's a lot more to learn.
d. Marijuana is helpful for scratches, bug bites, and rashes.

9. What does the doctor mean when she says cannabis is not "a silver bullet"?

a. Cannabis won't kill you immediately like a bullet from a gun will.
b. Cannabis is not a deadly weapon like a gun.
c. Cannabis is a perfect treatment for all patients.
d. Cannabis isn't a miracle cure that will work for everyone in all cases.

10. What does the geneticist mean when he says: "Understanding cannabis's genome is like discovering some hidden motif deep in a piece of music. Through remixing, you can accentuate it and turn it up so that it becomes a prominent feature of the song."

a. Once you map cannabis's genome, you can create new strands that intensify specific properties in the plant.
b. Cannabis's genome is beautiful, just like a motif of a song.
c. Cannabis is especially important for improving creativity of composers and musicians.
d. If you understand cannabis's genome, you can create very strong versions of the drug to get people high with very small amounts.

Part 3: Writing

Writing: Choose one quote and write two paragraphs. In the first paragraph, you should analyze the author's point of view and describe the metaphor he uses. In the second paragraph, give your own opinion and response to the quote.

Environmental pollution is an incurable disease. It can only be prevented.	Destroying rainforest for economic gain is like burning a priceless painting to cook a meal.
Harmony with land is like harmony with a friend; you cannot cherish his right hand and chop off his left.	We don't have to sacrifice a strong economy for a healthy environment.
I think the environment should be put in the category of our national security. Defense of our resources is just as important as defense abroad. Otherwise what is there to defend?	Water and air, the two essential fluids on which all life depends, have become global garbage cans.

_____

_____

_____

_____

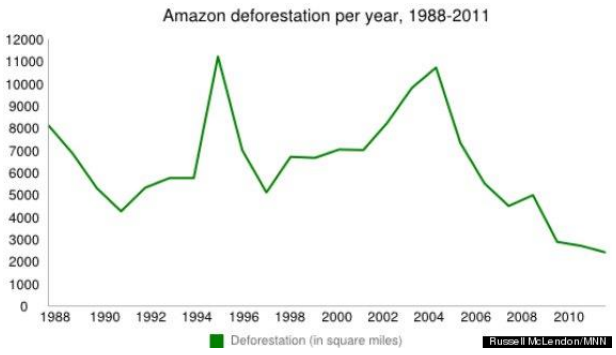
Part 4: Speaking

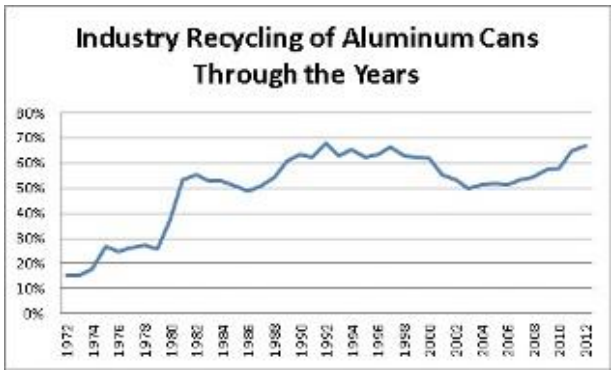
Task 1: Pick 2 questions below to discuss with your partner. Say whether you agree or disagree with the statements, and then explain why.

1. Who should be more responsible for addressing a country's environmental issues: the government or individual citizens?
2. Which is more true: human activity improves the conditions of living on Earth and makes it a better place to live or humans destroy our planet and lead it into decline?
3. Which is more important: protecting the environment or economic development? Why?
4. Do you think animal testing should be banned? Why or why not?
5. Do you think corporations are responsible for protecting the environment? Why or why not?
6. Which country in the world do you think is the most environmentally friendly? The least environmentally friendly? Why?

Task 2: Tell a short story about something interesting that happened when you were a child.

Task 3: Describe one of the graphs below to your partner. What does the graph show and what does it mean?





Appendix C: Post-Test

Post-Test

Part 1: Listening (30 points)

A) Alex Steffen: The shareable future of cities: 8:01-10:00

Directions: Watch the last two minutes of Alex Steffen's lecture on creating sustainable development in cities and answer the questions below

1. What does the speaker mean when he says "lots of people have taken to heart this idea that a sustainable city is covered in greenery"?

a. Lots of people believe that a sustainable city is a city that captures rainwater and has pollinator pathways for bees and butterflies.
b. Lots of people have rejected the idea that a sustainable city must be covered in plants and instead focus on green infrastructure.
c. Lots of people have accepted the image of a sustainable city as a city that is covered in plants.
d. Lots of people believe that a sustainable city is a city that recycles carbon.

2. What does the speaker mean when he warns that "we are going to run out of future really fast"?

a. He means that we must develop technology to deal with environmental issues before the future catches up with us.
b. He means that currently we are using more resources than we have so that we are rapidly using up all our "future" resources.
c. He means that we are currently developing technology that we will be able to use to combat environmental issues in the immediate future.
d. He means that the future will be here really fast and we must plan for it now.

3. What is the main idea of the speaker's talk?

a. We can work together to develop sustainable cities that won't use up all of Earth's resources.
b. We should build cities that capture rainwater so we can reduce our overall water use.
c. A green city is a city that is covered in different plants, so that we utilize extra space for agriculture.
d. Sustainable cities should connect us back to the ecosystems around us by connecting us to rivers and allowing for restoration.

B) George Monbiot: For more wonder, Rewild the world: 0:00 – 2:48

Directions: Watch the first three minutes of George Monbiot's lecture on rewilding the world and answer the questions below.

4. What does the speaker mean when he says, "I found myself sort of scratching at the walls of life?"

a. He felt restricted in both his life and career, and wanted to widen his range of responsibilities and duties both at home and at work.
b. He was unsatisfied with his life, which had become boring and unchallenging since he returned from working overseas.
c. He was unhappy with his career, and wanted to reach a higher position in his company to achieve a better life.
d. He felt constrained and confined in an unhappy marriage that he couldn't escape.

5. According to the speaker, what's the problem with modern life?
a. Modern life is too comfortable and safe, giving us no opportunity to use skills and emotions we evolved to deal with dangerous threats.
b. Modern life is filled with uncertainty and danger, so people feel anxious and stressed out in their daily lives.
c. Modern life lacks the authenticity of the past.
d. The modern life span is too long, and we lack the chance to interact with wild animals like we used to in the past.

6. What does the speaker mean when he says "I just wanted a richer and rawer life?"

a. He wanted to make more money and become a richer man.
b. He wanted to lead the lifestyle of a hunter-gather from the past.
c. He wanted to have a more comfortable life full of luxury goods like sports cars.
d. He wanted a more fulfilling life that was more connected to the natural world.

C) George Monbiot: For more wonder, Rewild the world: 10:08 – 14:53

Directions: Watch the last three minutes of George Monbiot's lecture on rewilding the world and answer the questions below.

7. What does the speaker mean by "the shadows of these great beasts?"

a. the death and extinction of large megaflauna from Europe such as ancient elephants and rhinoceros
b. the large shadows cast by extremely large megaflauna such as elephants
c. the influence of ancient megaflauna on our current ecosystem
d. the danger and threat from large megaflauna such as rhinoceros and lions

8. What does the speaker mean when he suggests we should all have "a Serengeti on our doorsteps?"

a. Everyone should try to visit the Serengeti National Park in Africa to see animals in their natural habitats at least once in their life.

b. We should recreate the environment of the Serengeti National Park in other countries so people can experience this natural landscape.
c. Everyone should be able to live close to a natural area where they can see animals in the wild.
d. We should rewild areas close to home by introducing the animals from the Serengeti National Park in other areas throughout the world.

9. What does the speaker mean when he says, "In motivating people to love and defend the natural world, an ounce of hope is worth a ton of despair?"

a. It's easier to encourage people to protect nature if you focus on positive aspects and an optimistic future through rewilding.
b. You can motivate people to conserve the environment if you present them with statistics on the number of extinct species that no longer exist today.
c. Climate change is causing irreversible damage to the environment and ecosystems today, so people need to start protecting endangered species.
d. The speaker is very hopeful that people will start connecting with nature and advocate for rewilding in their own backyards.

10. What is the main idea of the speaker's talk?

a. Rewilding can lead to numerous benefits, such as helping rebuild natural ecosystems and helping people reconnect with nature.
b. Rewilding can lead to numerous benefits, such as revitalizing the wolf population in Yellowstone and the whale population in the ocean.
c. Rewilding can lead to numerous benefits, including bringing elephants and rhinoceroses to the city of London.
d. Rewilding can lead to numerous benefits by revitalizing the ancient hunter-gatherer lifestyle by reintroducing large animal species to areas throughout the world.

Part 2: Reading (30 points)

A) Directions: Read the article below and answer the questions.

Ethiopia Aims for a Bright, Green Climate Future

Scientific American, October 2015

Unlike many of its sub-Saharan neighbors, which have embraced economic growth at the expense of environmental protections, Ethiopia has embarked on one of the world's most ambitious green growth and climate mitigation programs. Nothing like it has been tried before, much less in one of the world's largest and poorest nations.

The blueprint for Ethiopia's climate agenda, drafted by the government in 2011 and now being implemented across all levels of society is embodied in a 15-page document called the "Climate-Resilient Green Economy strategy," or CRGE.

The challenge is immense, the cost astronomical, and failure is a possibility.

A path to a low-carbon Africa?

No one, least of all Ethiopia's prime minister, Hailemariam Desalegn, is bowing to the conventional wisdom that Ethiopia's only path to climate security is through foreign aid agencies and nongovernmental organizations. In fact, officials here argue the opposite, often invoking the words of the late Prime Minister Meles Zenawi. In 2009, he told U.N. climate delegates gathered in Copenhagen, Denmark, that Ethiopia would not stand by as Western nations develop and implement strategies to address the world's most pressing environmental problem.

"Africa is a continent of the future; it is destined to be a growth pole of the 21st century," Zenawi declared. "We are therefore here not as victims of the past," he added, "but as stakeholders of the future reaching out across the continents, so that together we can build a better and fairer future for all of us ... Africa is a green field that can and wants to chart a different course of development, one that is not carbon-intensive."

Now Ethiopia faces an early critical test of its climate commitments as it prepares to impose binding caps on greenhouse gas emissions for 2020 and beyond. There is an expectation that a country like Ethiopia, endowed with some of the continent's greatest renewable resources, can and will develop a program to secure its own climate security while providing a model for its neighbors to follow.

1. What is the main idea of the article?

a. Ethiopia is too poor a country to worry about environmental issues. Instead, it should focus on developing its economy as rapidly as possible.
b. To combat climate change, Ethiopia needs a lot of help from foreign agencies and nongovernmental organizations.
c. Despite being an extremely poor country, Ethiopia has developed an aggressive plan to combat climate change while still developing economically.
d. Ethiopia is following the lead of other sub-Saharan African nations by developing environmental plans to combat climate change.

2. Why does Zenawi say we are not "victims of the past," but "stakeholders for the future"?

a. Instead of focusing on Ethiopia's past history and economic development, he wants to focus on plans and actions Ethiopia can take for future environmental security.
b. Instead of focusing on Ethiopia's past economic development, he wants to focus on business and building the economy for Ethiopia's future.
c. Although Ethiopia was a victim of colonial rule and political instability in the past, now it is no longer a victim.
d. Ethiopia has ambitious plans to develop into Africa's richest and most powerful country.

3. What is the author's tone and attitude in this article?

a. The author is skeptical that Ethiopia will be successful because of its extreme poverty.
b. The author is judgmental and critical, believing that even if Ethiopia can implement its environmental plans, other African nations will not follow and decrease their carbon emissions too.

c. The author is optimistic that Ethiopia's ambitious environmental plans could succeed and even serve as a model for other African nations.
d. The author is enthusiastic, expressing certainty that Ethiopia's plans will help the country address environmental concern while developing their economy.

4. Why does Zenawi say "Africa is a green field that can and wants to chart a different course of development"?

a. Zenawi envisions more trees and plants in countries throughout Africa through reforestation programs.
b. Zenawi believes that Africa should continue on its current path by focusing solely on economic development.
c. Zenawi wants to emphasize the desire to make a change from past economic development at the expense of the environment to future development which protects the environment.
d. Zenawi believes that Africa is a "green field" rich in agricultural resources that can feed the world.

B) Directions: Read the article and answer the questions below.

The world just agreed to a major climate deal in Paris. Now comes the hard part.

After two weeks of bleary all-nighters in Paris, diplomats from around the world have hammered out a major global agreement to address climate change. The full 31-page document was approved by 195 countries on Saturday.

It's important to be clear on what this wad of paper actually does. The Paris climate agreement hasn't saved the planet, and it hasn't solved global warming. Not by itself. Instead, the deal is supposed to add structure and momentum to efforts that are currently underway around the world to reduce greenhouse gas emissions. That's a worthwhile task in its own right. Since 2014, nearly every country has submitted a voluntary plan to the United Nations for tackling climate change. But those pledges, in the aggregate, remain weak and inadequate.

What this Paris agreement does is provide a set of diplomatic tools to prod countries into cutting emissions even more deeply over time. The deal's text starts with aspirational goals: The world should aim for an emissions peak "as soon as possible" and limit total warming to less than 2°C, or perhaps even to 1.5°**C**. It's a signal that countries at least hope to do more than they're already doing.

Despite this, the Paris deal is only a first step. Perhaps the easiest step. To stop global warming, every country will have to do much, much more in the years ahead to transition away from fossil fuels, move to cleaner sources, and halt deforestation. Countries will have to pursue new policies, adopt new technologies, go far beyond what they've already promised.

5. What is the main idea of the article?

a. While the Paris climate deal is a good sign that countries are moving in the right direction, it is not strong enough to completely combat climate change.
b. Since the Paris climate deal was signed by 195 countries, it means that working together, we will be able to prevent climate change within the next twenty years.
c. The Paris climate deal will enable countries to limit total warming to less than 2°C, or perhaps even to 1.5°**C**.
d. Having countries submit voluntary plans to the United Nations for tackling climate change is an effective way to reduce global climate change.

6. Why does the author say the Paris deal is "only a first step"?

a. The author is looking ahead to the next meeting to talk about global warming in five years.
b. The author knows that by signing the Paris deal, all the countries are committing to taking several more steps to combat global warming next year.
c. The author thinks the Paris deal is a really strong agreement and will help countries stop global warming in the next few years.
d. The author believes countries are not doing enough to stop global warming and need to go farther in their efforts to combat global warming.

C) Directions: Read each politicians' quote about the Paris Climate Change Deal. Then answer the questions below.

U.S. President Obama	Former French Climate Minister, Serge Lepeltier	U.S. Secretary of State, John Kerry	U.K. Prime Minister Cameron
"No nation, not even one as powerful as ours, can solve this challenge alone. And no country, no matter how small, can sit on the sidelines. All of us had to solve it together. This agreement represents the best chance we have to save the one planet we've got. I believe this agreement can be a turning point for the world."	"There has to be a global agreement with binding constraints. Without those commitments, what is done by local authorities and companies will remain marginal. Can we risk non-agreement in Paris? We can't have a minimal agreement that won't truly combat climate change. We should take the risk of no agreement rather than accept a weak agreement."	This is a tremendous victory for all of our citizens, not for any one country, or any one bloc, but for everybody here who has worked so hard to bring this across the finish line. It is a victory for all of the planet and for future generations. We have set a course here. The world has come together around an agreement that will empower us to chart a new path for our planet, a smart and responsible path, a sustainable path.	The talks at the COP21 conference in Paris have culminated in a global deal, with the whole world now signed up to play its part in halting climate change. In other words, this generation has taken vital steps to ensure that our children and grandchildren will see that we did our duty in securing the future of our planet. What is so special about this deal is that it puts the onus on every country to play its part.

7. What does President Obama mean when he says that no country "can sit on the sidelines"?

a. every country must participate in global environmental efforts, rather than watching from the sidelines, as in a sports match
b. every country must participate in global environmental efforts, rather than moving to the sidelines of the road
c. we can only save the planet if every country stays on the sidelines of global warming
d. it's only important for larger countries to participate in global environmental efforts; smaller countries can wait on the sidelines

8. Which of the following would Serge Lepeltier consider "binding constraints"?

a. countries agreeing to meet and talk every five years
b. countries talking about environmental goals for the next year
c. countries submitting voluntary plans to the United Nations for tackling climate change
d. countries signing an official agreement and paying fines or other consequences for not meeting their climate change goals

9. When talking about the Paris Climate Change Deal, who is John Kerry referring to when he says, "everybody here who has worked so hard to bring this across the finish line"?

a. scientists who have been researching climate change over the last ten years
b. the news media, who publicized and wrote about the Paris Climate Change talks
c. the president of Paris, who organized and hosted the Paris Climate Change talks
d. the politicians and diplomats from around the world who met and signed the deal in Paris

10. Based on the quotation above, what is Prime Minister Cameron's attitude towards the Paris Climate Change deal?

a. He is optimistic that the climate change deal will involve all countries and help combat the effects of global climate change.
b. He is happy that every country is involved in the climate change deal, but he is skeptical that they will actually follow through with their promises.
c. Although he supports the climate change deal, he is not sure whether or not the UK can play its part in combating global warming.
d. He thinks the climate change deal will be totally inefficient and have no measurable effect on global climate change.

Part 3: Writing (20 points)

Writing: Choose one quote and write two paragraphs. In the first paragraph, you should analyze the author's point of view and describe the metaphor he uses. In the second paragraph, give your own opinion and response to the quote.

No one is an environmentalist by birth. It is only your path, your life, your travels that awaken you. - Yann Arthus-Bertrand	Nature provides a free lunch, but only if we control our appetites. – William Ruckelshaus
It seems to me like Mother Nature's mercy and forgiveness have run dry, as we ceaselessly abuse her and take her for granted in order for us to continue our addiction to using fossil fuels. I've gotta say, I don't blame her. Not one bit. - Gloria Reuben	One of the big questions in the climate change debate: Are humans any smarter than frogs in a pot? If you put a frog in a pot and slowly turn up the heat, it won't jump out. Instead, it will enjoy the nice warm bath until it is cooked to death. We humans seem to be doing pretty much the same thing. – Jeff Goodell
"Keep close to Nature's heart… and break clear away, once in awhile, and climb a mountain or spend a week in the woods. Wash your spirit clean." *—John Muir*	A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people. – Franklin D. Roosevelt

Part 4: Speaking

Task 1: Pick 2 questions below to discuss with your partner. Say whether you agree or disagree with the statements, and then explain why.

(Questions for EFL Students)

1. The government should reduce the amount of money spent on local environmental problems and instead increase funding into urgent and more threatening issues such as global warming. To what extent do you agree with this statement?
2. Global environmental issues should be dealt with internationally rather than domestically. To what extent do you agree with this statement?
3. Are companies more or less environmentally responsible now than they were in the past? Why do you think that is?
4. Which is more important, increasing people's standard of living, or protecting the environment?
5. How important is protecting endangered species? What steps should be taken to protect animals?
6. In your opinion, what is the biggest environmental problem in Ecuador today? Why is this such a big issue? What should be done to solve this problem?

(Questions for ESL Students)

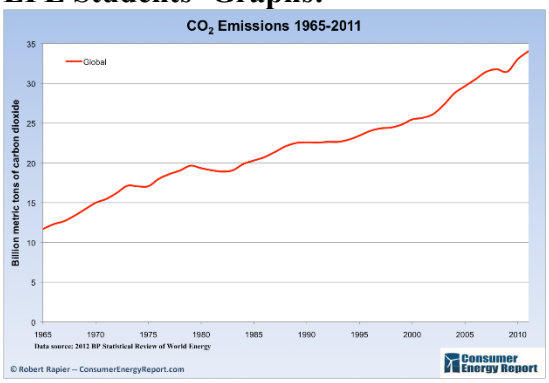
1. Do you think graffiti should be considered art or should it be considered vandalism? Why?
2. Museums should return pieces of art to their country of origin. Do you agree with this statement? Why or why not?
3. Anything can be art. Do you agree with this statement? Why or why not?

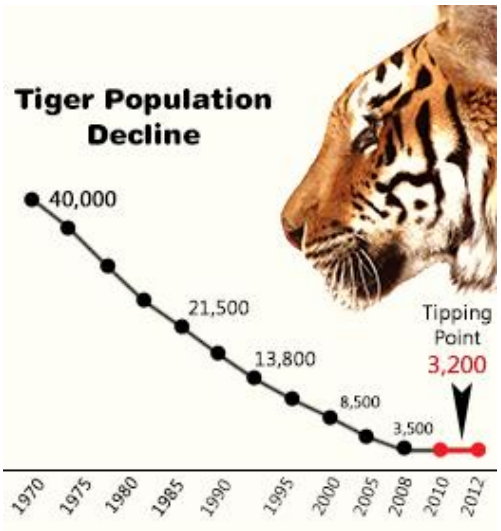
4. New York City spends several million dollars a year to remove graffiti from its subways and streets. Is that money well spent? Should graffiti be removed from public areas? Why or why not?

Task 2: Tell a short story about something interesting that happened with you and a family member when you were a child.

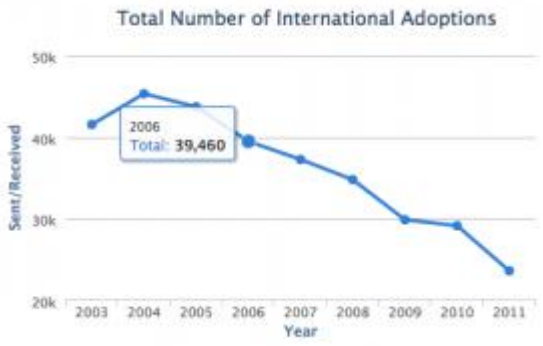
Task 3: Describe one of the graphs below to your partner. What does the graph show and what does it mean?

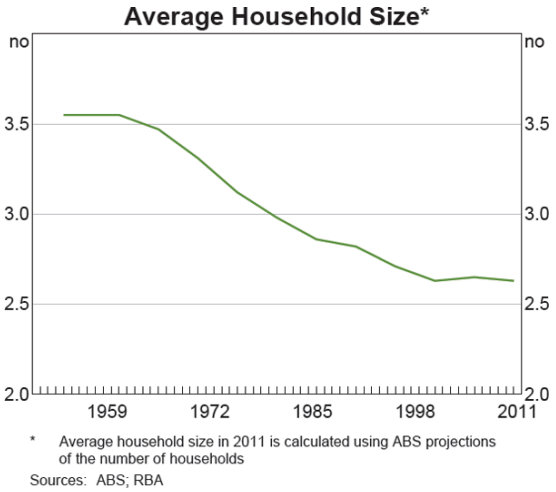
EFL Students' Graphs:





ESL Students' Graphs:





Appendix D: Metaphor Awareness Test

Pre-Test:

Directions: Give the following sentences a score from 1 to 5, 1 meaning definitely literal and 5 meaning definitely figurative. If you don't understand the meaning of the sentence at all, give it a score of 0.

1. The findings have sparked a heated debate at City Hall over whether to give lawmakers more say over the program.

2. In your first year, your sole focus should be on laying the organizational and creative foundation of your new company.

3. I got excited when the theater lights darkened because I knew it was time for the play.

4. Others whisper that the country is now gripped by fear, and that resentment seethes beneath the surface.

5. They work in the sense that they to a certain extent do plant an idea in voters' minds, questions about a particular candidate.

6. If your lawn mower isn't working properly, maybe it needs a new spark plug or fuel filter.

7. The book's storyline describes ladies who live in an Icelandic village and plant trees to decrease the wind, which has been blowing strongly.

8. There are rumors that their marriage is on the rocks.

9. The tourist got lost in the new city and had to ask a nearby cashier at a convenience store for directions.

10. In Spain, the unemployment rate is twenty percent higher among the young and that's after the government's severe austerity measures trying to bring down the public debt and revive the economy.

11. Because of the civil war, her parents sent her away with a suitcase full of gifts for the relatives in California who had agreed to let her live with them.

12. There is little air or water beneath the concrete foundation of a house.

13. He doesn't really like the sport and he's just wasting hours of my time.

14. When you're on vacation, it's good to go far away by going skiing or mountain climbing in another country.

15. An often-cited United Church of Christ (1987) study demonstrated that minority groups tend to live near sites with likely health risks, such as hazardous waste facilities and polluting industries.

16. Security officials said doctors had to revive him twice with a heart defibrillator on the way to the hospital.

17. Sung was just starting his neurosurgery career and wanted to make up for lost time.

18. The mood in the room quickly darkened whenever my father brought up our family's financial problems.

19. The real point, he says, is to live life to the fullest, regardless of what fate has put in the way.

20. The child gripped his mother's hand as they walked across the street.

21. The oldest sedimentary rocks are about 3.9 million years old and can be found in Greenland.

22. Their relationship is in really good shape – they have a strong, healthy marriage.

23. The unobtrusive break pad has a simple design and basic shape that provides consistent support and cushioning.

24. He told his children over and over that a person can go far in life if he get a good education, works hard, and helps his community.

Post-Test:

Directions: Give the following sentences a score from 1 to 5, 1 meaning definitely literal and 5 meaning definitely figurative. If you don't understand the meaning of the sentence at all, give it a score of 0.

1. Before I met her, there was a hole in my heart that could not be filled and something was missing from my life.

2. I'm a big believer in Sam's philosophy that when it comes to good ideas, you should steal shamelessly.

3. The young boy got up, motioned me to follow him to the main door, and inserted one of the keys in the keyhole.

4. When you're down in the dumps, do something for someone else – it helps you forget your woes.

5. Keeping flowers in the office is good not only for decoration, but also for brightening your spirits.

6. Life is an uphill battle for Mildred Clark and her mother Ruby, who suffers from Alzheimer's disease and the burden of poverty.

7. When Tom's alarm rings, the room lights brighten slowly, the curtains open, and he hears one of his favorite CDs coming from the living-room stereo.

8. I could feel the electricity between us – there were sparks from the very first moment we met.

9. They're starting to change their business model and branching out into things like the music industry.

10. Police are looking for a suspect who tried to steal a car and then fired five shots at the vehicle owner.

11. A free-market dollar economy has taken root in Cuba, with prices determined by supply and demand.

12. On the island, we cooked everything in a big hole in the ground on rocks heated by a hardwood fire.

13. Nonetheless, faculty and students are free to follow any argument, any point of inquiry, wherever it may lead.

14. If you think about the amount of space they use, it seems like garbage dumps are the world's worst environmental problem.

15. The U.S. Department of Energy says hydropower has the potential to generate electricity for more than four million homes.

16. As we go through the years, we pick up many new life lessons and skills.

17. We had to take a detour because a large tree branch was blocking the road after last night's storm.

18. The ground battle did not stop the firing of Palestinian rockets and missiles, but it did reduce it considerably.

19. Where people are born is just luck of the draw, and yet it affects so many aspects of their lives.

20. The passionate artist "always carried around her markers and pencils so that she could draw a picture of make a card for those around her," recalls her father, Robbie Parker.

21. Tom arrived in Armenia sixteen year ago, about nine years after the nation gained its independence after the end of the Soviet Union.

22. When you can't seem to turn off your mind, this distraction forces you to concentrate on something other than your racing thoughts.

23. I decided to have miso soup with root vegetables and brown rice at the new Japanese restaurant in Phoenix.

24. I'm so exhausted I just want to turn off the lights, close my eyes, and go to sleep.

Appendix E: Class Evaluation Forms for Experimental Groups

Check the box to show your opinion.
(1=strongly disagree with the statement, 10= strongly agree with the statement)

	1	2	3	4	5	6	7	8	9	10
1. I think it's important to be able to understand and use figurative language in English.										
2. The class activities and worksheets on reading figurative language (ppt about metaphor, reading newspaper headlines, article about marijuana, worksheet on metonymy, article about the pope and green energy) were useful to me.										
3. The class activities and worksheets on listening to figurative language (listening to songs, lecture on food waste, lecture on development and the environment) were useful to me.										
4. The class activities and worksheets on speaking with figurative language (describing people with figurative language, telling stories, worksheet on giving your opinion, and worksheet and activities for describing graphs) were useful to me.										
5. The class activities and worksheets on writing with figurative language (making an environmental campaign, responding to quotes, and writing stories) were useful to me.										
6. I improved in my ability to understand figurative language in reading texts because of this class.										
7. I improved in my ability to understand figurative language in listening texts because of this class.										
8. I improved in my ability to use figurative language in my speaking because of this class.										
9. I improved in my ability to use figurative language in my writing because of this class.										
10. I learned a lot from watching my own videos and completing the self-reflection form.										
11. These classes made me more aware of the types of gestures I use and how they affect my communication.										
12. I can identify and understand figurative language in English.										
13. I can use figurative language accurately in English.										
14. In general, my English skills improved because of the figurative language classes.										

Answer the following with a few sentences and SPECIFIC information.

1. Which activities in the figurative language classes were the most interesting or useful for you?

_____

_____

2. Which activities in the figurative language classes were the least interesting or useful for you?

_____

_____

3. Did the classes make you more aware of and better able to understand figurative language in English? Was this helpful for you?

_____

_____

4. Do you have any other comments about the figurative language classes?

_____

_____

Appendix F: Quotation Task Rubric

Paragraph 1:

Metaphor Identification

0	- Cannot or does not attempt to identify any part of the metaphor.
1	- Attempts to identify the writer's metaphor, but makes major mistakes relating to the source domain, the target domain, or elaborations of the metaphor.
2	- Attempts to identify the writer's metaphor, but makes some minor mistakes relating to the source domain, the target domain, or elaborations of the metaphor.
3	- Identifies the metaphor in general, but does not explicitly state either the source or target domain of the metaphor. Does not elaborate on specific characteristics that are transferred from the source to the target domain.
4	- Clearly identifies all parts of the metaphor by explicitly stating both the source and target of the metaphor, but does not elaborate on specific characteristics that are transferred from the source to the target domain.
5	- Clearly identifies all parts of the metaphor by explicitly stating both the source and target of the metaphor, as well as specific characteristics that are transferred from the source to target domain.

Metaphor Interpretation

0	- Cannot or does not attempt to interpret the metaphor.
1	- Attempts to interpret the writer's metaphor, but makes major mistakes relating to the writer's evaluative stance, perspective, or overall use of the metaphor.
2	- Attempts to interpret the writer's metaphor, but makes some minor mistakes relating to the writer's evaluative stance, perspective or overall use of the metaphor.
3	- Interprets the metaphor in general, but interpretation lacks depth and specific details relating to the writer's evaluative stance, perspective, or overall use of the metaphor.
4	- Clearly and accurately interprets the metaphor and gives some specific details demonstrating some knowledge of the writer's evaluative stance, perspective, and overall use of the metaphor.
5	- Clearly and accurately interprets the metaphor and gives specific details and explanations clearly demonstrating knowledge of the writer's evaluative stance, perspective, and overall use of the metaphor.

Paragraph 2:

Expressing Opinions

0	- Cannot or does not attempt to give opinion in response to the metaphor.
1	- Attempts to give an opinion in response to the metaphor, but opinion is unrelated or unconnected to the metaphor. Opinion may also be unclear, lacking explanation or elaboration.
2	- Attempts to give an opinion in response to the metaphor, but opinion may be somewhat unrelated or unconnected to the metaphor. Opinion may be somewhat unclear, lacking sufficient explanation or elaboration.
3	- Gives a general opinion directly related to the writer's metaphor. Opinion includes some explanations or elaboration, but these may still be insufficient to clearly express the students' evaluative stance and perspective on the topic.
4	- Clearly and directly states opinion in response related directly to the writer's metaphor. Includes explanation and elaboration of opinion that shows the students' evaluative stance and perspective on the topic, but may still be lacking some details.
5	- Clearly and directly states opinion in response related directly to the writer's metaphor. Includes detailed explanation and elaboration of opinion that clearly shows the students' evaluative stance and perspective on the topic.

Appendix G: Writing Sample Rubrics

Narrative Writing Samples Rubric (based on CEFR)

General Linguistic Range		
Excellent	Can exploit a comprehensive and reliable mastery of a very wide range of language to formulate thoughts precisely, give emphasis, differentiate, and eliminate ambiguity. No signs of having to restrict what he/she says.	18-20
Very Good	Can select an appropriate formulation from a broad range of language to express him/herself clearly, without having to restrict what he/she wants to say.	14-17
Good	Can express him/herself clearly and without having much sign of having to restrict what he/she wants to say. Has a sufficient range of language to be able to give clear descriptions, express viewpoints and develop arguments without much conspicuous searching for words, using some complex sentence forms to do so.	11-13
Average	Has enough language to get by, with sufficient vocabulary to express him/herself with some hesitation and circumlocutions on topics such as family, hobbies and interests, work, travel, and current events, but lexical limitations cause repetition and even difficulty with formulation at times.	7-10
Poor to Fair	Has a repertoire of basic language, which enables him/her to deal with everyday situations with predictable content. Can use basic sentence patterns and communicate with memorized phrases, groups of a few words and formulae about themselves and other people, what they do, places, possessions, etc. Has a limited repertoire of short memorized phrases covering predictable survival situations: frequent breakdowns and misunderstandings occur in non-routine situations.	4-6
Very Poor	Has a very basic range of simple expressions about personal details and needs of a concrete type.	1-3
Task Achievement		
Excellent	Can write clear, smoothly flowing and fully engrossing stories and descriptions of experience in a style appropriate to the genre.	18-20
Very Good	Can write clear, detailed, well-structured and developed descriptions and imaginative texts in an assured, personal, natural style appropriate to the reader in mind. Can give elaborate descriptions and narratives, integrating sub themes, developing particular points, and rounding off with an appropriate conclusion.	14-17
Good	Can write clear, detailed descriptions of real or imaginary events and experiences marking the relationship between ideas in clear, connected text, and following established conventions of the genre concerned. Can develop a clear description or narrative, expanding and supporting his/her main points with relevant supporting details and examples.	11-13
Average	Can write accounts of experiences, describing feelings and reactions in simple connected texts. Can reasonably fluently relate a straightforward narrative or description as a linear sequence of points.	7-10
Poor to Fair	Can write very short, basic descriptions of events, past activities, and personal experiences Can tell a story or describe something in a simple list of points.	4-6
Very Poor	Can write simple phrases and sentences about themselves and imaginary people, where they live and what they do.	1-3
Organization and Cohesion		
Excellent	Can create a coherent and cohesive text making full and appropriate use of a variety of organizational patterns and a wide range of cohesive devices.	18-20

Very Good	Can produce clear, smoothly flowing, well-structured speech, showing controlled use of organizational patterns, connectors, and cohesive devices.	14-17
Good	Can use a variety of linking words efficiently to mark clearly the relationships between ideas.	11-13
Average	Can link a series of shorter, discrete, simple elements into a connected, linear sequence of points.	7-10
Poor to Fair	Can use the most frequently occuring connectors to link simple sentences in order to tell a story or describe something as a simple list of points. Can link groups of words with simple connectors like “and,” “but,” and “because.”	4-6
Very Poor	Can link groups of words with very basic connectors like “and” or “then.”	1-3
Accuracy of Grammar		
Excellent	Maintains consistent grammatical control of complex language.	18-20
Very Good	Consistently maintains a high degree of grammatical accuracy; errors are rare and difficult to spot	14-17
Good	Good grammatical control. Occasional “slips” or non-sytematic errors and minor flaws in sentence structure may still occur, but they are rare. Shows a relatively high degree of grammatical control. Does not make mistakes which lead to misunderstanding.	11-13
Average	Communicates with reasonable accuracy in familiar contexts; generally good control but with noticeable mother tongue influence. Errors occur, but it is clear what he/she is trying to express. Uses reasonably accurately a repertoire of frequently used “routines” and patterns associated with more predictable situations.	7-10
Poor to Fair	Uses some simple structures correctly, but still systematically makes basic mistakes – for example tends to mix up tenses and forget to mark agreement; nevertheless, it is usually clear what he/she is trying to say.	4-6
Very Poor	Shows only limited control of a few simple grammatical structures and patterns in a learnt repertoire.	1-3
Range and Accuracy of Vocabulary		
Excellent	Has a good command of a very broad lexical repertoire including idiomatic expressions and colloquialisms; shows awareness of connotative levels of meaning Consistently correct use of vocabulary	18-20
Very Good	Has a good command of a broad lexical repertoire allowing gaps to be readily overcome with circumlocations; little obvious searching for expressions or avoidance strategies. Good command of idiomatic expressions and colloquialisms. Occasional minor slips, but no significant vocabulary errors	14-17
Good	Has a good range of vocabulary for matters connected to his field and most general topics. Can vary formulation to avoid frequent repetition, but lexical gaps can still cause hesitation and circumlocation. Lexical accuracy is generally high, though some confusion and incorrect word choice does occur without hindering communication.	11-13
Average	Has a sufficient vocabulary to express him/herself with some circumlocations on most topics pertinent to his everyday life such as family, hobbies and interests, work, travel, and current events. Shows good control of elementary vocabulary but major errors still occur when expressing more complex thoughts or handling unfamiliar topics and situations.	7-10
Poor to Fair	Only has sufficient vocabulary to conduct routine, everyday transactions, express basic communicative needs, or cope with simple survival needs. Can control a narrow repertoire of vocabulary dealing with concrete everyday needs.	4-6
Very Poor	Has a basic vocabulary repertoire of isolated words and phrases related to particular concrete situations. Frequent vocabulary errors obscure communication.	1-3

Summary/Response Writing Samples Rubric (from ASU Global Launch IEP curriculum)

SUMMARY (OUT OF 40)

	Very well	Satisfactorily	Inconsistently	Unsatisfactorily
Do the first sentences include the **author, year, and title** of article? Does the first sentence use an appropriate **reporting verb**?	5	4	3	2-0
Do the first sentences state the **main idea of the whole article**?	10	8	6	4-0
Is information taken from the article **paraphrased** appropriately?	5	4	3	2-0
Does the summary include all **important information, without unnecessary details**?	10	8	6	4-0
Does the whole summary reflect **comprehension** of the article?	10	8	6	4-0

RESPONSE (OUT OF 30)

	Very well	Satisfactorily	Inconsistently	Unsatisfactorily
Does the chosen idea represent an important idea in the article? Does the whole response reflect **comprehension** of the article?	10	8	6	4-0
Is it quoted, **paraphrased**, or **summarized** appropriately?	5	4	3	2-0
Does the discussion show **experience**, **application**, or **argument** that is **well-developed** and **supported**?	10	8	6	4-0
Does the response make a clear connection to important ideas from the article?	5	4	3	2-0

LANGUAGE PROFICIENCY (OUT OF 30)

	Very well	Satisfactorily	Inconsistently	Unsatisfactorily
Does the student produce grammatically complete complex sentences that contain subordinate adverbial clauses through a variety of **subordinate conjunctions** and **logical connectors (transitions)** to clearly relate ideas and events?	10	8	6	4-0
Does the student relate events with clarity in writing (of all types), employing accurate use of **verb tenses**?	5	4	3	2-0
Does the student correctly use a wide range and specificity of **academic and every day vocabulary**?	5	4	3	2-0
Does the student recognize the form and function of different **parts of speech** and use nouns, adjectives, and adverbials accurately?	5	4	3	2-0
Does the student write sentences with accurate sentence structure, including using **punctuation** and **capitalization** properly in writing?	5	4	3	2-0

TOTAL	/100

Appendix H: Video Rating Rubrics

A) IELTS Speaking Rubric (participants can receive a half score)

IELTS Speaking Band Descriptors (public version)

Band	Fluency and coherence	Lexical resource	Grammatical range and accuracy	Pronunciation
9	• speaks fluently with only rare repetition or self-correction; any hesitation is content-related rather than to find words or grammar • speaks coherently with fully appropriate cohesive features • develops topics fully and appropriately	• uses vocabulary with full flexibility and precision in all topics • uses idiomatic language naturally and accurately	• uses a full range of structures naturally and appropriately • produces consistently accurate structures apart from 'slips' characteristic of native speaker speech	• uses a full range of pronunciation features with precision and subtlety • sustains flexible use of features throughout • is effortless to understand
8	• speaks fluently with only occasional repetition or self-correction; hesitation is usually content-related and only rarely to search for language • develops topics coherently and appropriately	• uses a wide vocabulary resource readily and flexibly to convey precise meaning • uses less common and idiomatic vocabulary skilfully, with occasional inaccuracies • uses paraphrase effectively as required	• uses a wide range of structures flexibly • produces a majority of error-free sentences with only very occasional inappropriacies or basic/non-systematic errors	• uses a wide range of pronunciation features • sustains flexible use of features, with only occasional lapses • is easy to understand throughout; L1 accent has minimal effect on intelligibility
7	• speaks at length without noticeable effort or loss of coherence • may demonstrate language-related hesitation at times, or some repetition and/or self-correction • uses a range of connectives and discourse markers with some flexibility	• uses vocabulary resource flexibly to discuss a variety of topics • uses some less common and idiomatic vocabulary and shows some awareness of style and collocation, with some inappropriate choices • uses paraphrase effectively	• uses a range of complex structures with some flexibility • frequently produces error-free sentences, though some grammatical mistakes persist	• shows all the positive features of Band 6 and some, but not all, of the positive features of Band 8
6	• is willing to speak at length, though may lose coherence at times due to occasional repetition, self-correction or hesitation • uses a range of connectives and discourse markers but not always appropriately	• has a wide enough vocabulary to discuss topics at length and make meaning clear in spite of inappropriacies • generally paraphrases successfully	• uses a mix of simple and complex structures, but with limited flexibility • may make frequent mistakes with complex structures, though these rarely cause comprehension problems	• uses a range of pronunciation features with mixed control • shows some effective use of features but this is not sustained • can generally be understood throughout, though mispronunciation of individual words or sounds reduces clarity at times
5	• usually maintains flow of speech but uses repetition, self-correction and/or slow speech to keep going • may over-use certain connectives and discourse markers • produces simple speech fluently, but more complex communication causes fluency problems	• manages to talk about familiar and unfamiliar topics but uses vocabulary with limited flexibility • attempts to use paraphrase but with mixed success	• produces basic sentence forms with reasonable accuracy • uses a limited range of more complex structures, but these usually contain errors and may cause some comprehension problems	• shows all the positive features of Band 4 and some, but not all, of the positive features of Band 6
4	• cannot respond without noticeable pauses and may speak slowly, with frequent repetition and self-correction • links basic sentences but with repetitious use of simple connectives and some breakdowns in coherence	• is able to talk about familiar topics but can only convey basic meaning on unfamiliar topics and makes frequent errors in word choice • rarely attempts paraphrase	• produces basic sentence forms and some correct simple sentences but subordinate structures are rare • errors are frequent and may lead to misunderstanding	• uses a limited range of pronunciation features • attempts to control features but lapses are frequent • mispronunciations are frequent and cause some difficulty for the listener
3	• speaks with long pauses • has limited ability to link simple sentences • gives only simple responses and is frequently unable to convey basic message	• uses simple vocabulary to convey personal information • has insufficient vocabulary for less familiar topics	• attempts basic sentence forms but with limited success, or relies on apparently memorised utterances • makes numerous errors except in memorised expressions	• shows some of the features of Band 2 and some, but not all, of the positive features of Band 4
2	• pauses lengthily before most words • little communication possible	• only produces isolated words or memorised utterances	• cannot produce basic sentence forms	• speech is often unintelligible
1	• no communication possible • no rateable language			
0	• does not attend			

B) Task Rubric (participants can receive a half score)

0	1	2	3	4
Speaker makes no attempt to respond or response is unrelated to the topic.	The response is very limited in content and/or coherence or is only minimally connected to the task, or speech is largely unintelligible.	The response addresses the task, but development of the topic is limited. It contains intelligible speech, although problems with delivery and/or overall coherence occur; meaning may be obscured in places.	The response addresses the task appropriately, but may fall short of being fully developed. It is generally intelligible and coherent with some fluidity of expression, though it exhibits some noticeable lapses in the expression of ideas.	The response fulfills the demands of the tasks, with at most minor lapses in completeness. It is highly intelligible and exhibits sustained, coherent discourse.

Appendix I: Powerpoint Introduction to CMT

Figurative Language

What is Figurative Language?

- the literal meaning of the words is different from the real meaning of the words

Example: It's raining cats and dogs.
(there are no actual dogs or cats, it's just raining hard)

Example: My sister is a real couch potato!
(my sister isn't really a potato, she just watches a lot of T.V.)

Metaphor: compares two things by saying they're the same
(**Example:** My brother is a pig!)
Simile: compares two things using "like" or "as"
(**Example:** Her skin is as white as snow.)
Idiom: common phrase where the meaning is different from the literal meaning of the words
(**Example:** This new dress cost me an arm and a leg.)

Why is figurative language important?

1) Very common, used a lot
- about 6 metaphors per minute

2) Affects the way we think about something
- Ex: War on Terror

3) Important for Communication
- Ex: Do you ***get my point*** ? Are you ***following*** me?

Source and Target Domains

Metaphors and Figurative language have two parts: **a source** and **a target**. Characteristics of the source are transferred to the target, but **not** ALL characteristics.

Ex: ***You can't teach an old dog new tricks,*** so I do not think that my father will ever change his eating habits.

Source: Old Dog → **Target: My Father**

- can't move well ✖
- can't learn new things well →
- doesn't change →
- can't hear well ✖
- can't see well ✖

Three More Examples

1) The teacher didn't like the student because she was always ***monkeying around*** in class.

Source Domain: Monkey **Target Domain: Student**

- wild ✖
- Energetic ✖
- Hairy ✖
- Playful →
- Loud ✖
- Brown ✖
- Not Serious →

Example 2

2) Her classmates didn't like her because they said she was a real ***copycat.***

Source Domain: Cat **Target Domain: Student**

- chase mice ✖
- imitate others →
- sleep in the day ✖
- purr ✖
- jump well ✖

Example 3

3) The teacher was surprised when the student answered his question because normally that student was **as quiet as a mouse**.

Source Domain: Mouse **Target Domain: Student**

- Meek
- Timid
- annoying ✉
- Shy
- Quiet
- Dirty ✉
- small ✉

Different Perspectives

Metaphors help us understand abstract ideas.

Different Metaphor/Figurative Language = Different Opinion/Viewpoint

+ How does your image of the student change if you think of her as a monkey, a cat, or a mouse?

Example 1:

	Source Domain	Target Domain
Words Used	Wasting, Will Save, Don't Have, Spend, Cost, Invest	Time, hours, the time, an hour,
Topic	Money	Time
Similarities	Both time and money are valuable resources that are limited.	

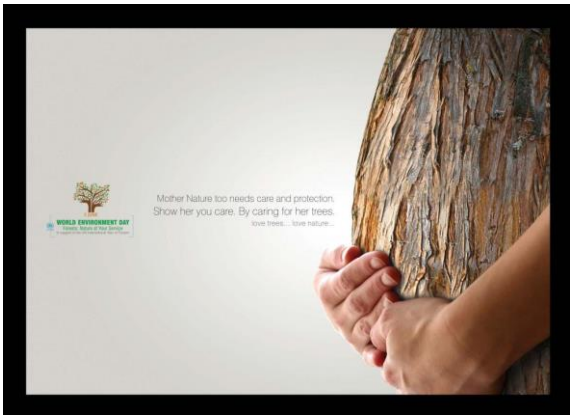
Example 2:

	Source	Target
Words Used	Indefensible, attacked, on target, demolished, won, shot down	Claims, argument
Topic	War	Argument/ Debate
Similarities	Both arguments and war can be won or lost. Both have two sides with two opponents.	

Appendix J: Metaphor and Metonymy Lessons: Reading

Reading Lesson 1:

Warm-Up: Look at the advertisements below. Can you explain them to a partner? Why did the advertisers choose these images?



Now look at the cartoons below. What makes each cartoon funny?

"Could you ask me how school was later?
Right now I'm off-line."

"Good news. The test results show it's a metaphor."

Newspaper Headlines

Topic	Headlines	Metaphor: Source and Target Domain?	Writer's Attitude?
Climate Change	1. Setting Big Goals, Hillary Clinton Joins the Climate Battle 2. A 'Third Way' to Fight Climate Change 3. Innovation Sputters in Battle Against Climate Change		
Climate Change	1. Obama to Unveil Tougher Environmental Plan With His Legacy in Mind 2. Unraveling the Relationship Between Climate Change and Health		
Solar Energy	1. Dark Days for Green Energy 2. Outlook for Solar Gets a Bit Brighter 3. Solar Power Begins to Shine as Environmental Benefits Pay Off		
Rain Forest	1. Another **Forest** Defender Falls in the **Amazon** 2. Losing Ground in the **Amazon** 3. In **Amazon Rain Forest**, a Vicious War Is Raging		

Reading Lesson 2

Directions: Read the title introduction below and underline all figurative language. Then discuss these questions with a partner:

1. What two things are being compared in each phrase you underlined?
2. What is the author's opinion towards marijuana? What makes you think this?

Science Seeks to Unlock Marijuana's Secrets
(National Geographic Magazine, June, 2015)

By Hampton Sides

As the once-vilified drug becomes more accepted, researchers around the world are trying to understand how it works and how it might fight disease.

As more and more people are turning to marijuana to treat ailments, the science of cannabis is experiencing a rebirth. We're finding surprises, and possibly miracles, concealed inside this once forbidden plant. Although marijuana is still classified as a Schedule I drug, Vivek Murthy, the U.S. surgeon general, recently expressed interest in what science will learn about marijuana, noting that preliminary data show that "for certain medical conditions and symptoms" it can be "helpful."

For many, cannabis has become a tonic to dull pain, aid sleep, stimulate appetite, buffer life's thumps and shocks. Pot's champions say it peels back layers of stress. It's also thought to be useful as, among other things, an analgesic, an antiemetic, a bronchodilator, and an anti-inflammatory. Compounds in the plant, some scientists contend, may help the body regulate vital functions—such as protecting the brain against trauma, boosting the immune system, and aiding in "memory extinction" after catastrophic events.

In the apparent rush to accept weed into the mainstream, to tax and regulate it, to legitimize and commodify it, important questions arise. What's going on inside this plant? How does marijuana really affect our bodies and our brains? What might the chemicals in it tell us about how our neurological systems function? Could those chemicals lead us to beneficial new pharmaceuticals?

If cannabis has something to tell us, what's it saying?

Group 1: Read "The Chemist" and answer the following questions in your group.

1. Underline AT LEAST 6 pieces of figurative language in the text. What two things are being compared?
2. What is Mechoulam's opinion of marijuana? How do you know?
3. What are some of the pros and cons or using marijuana mentioned in the text?

THE CHEMIST
Treasure Trove

Even into the middle of the 20th century, science still didn't understand the first thing about marijuana. What was inside it and how it worked remained a mystery. Because of its illegality and tainted image, few serious scientists wanted to besmirch their reputations by studying it.

Then one day in 1963 a young organic chemist in Israel named Raphael Mechoulam, working at the Weizmann Institute of Science outside Tel Aviv, decided to peer into the plant's chemical composition. So Mechoulam called the Israeli national police and scored five kilos of confiscated Lebanese hashish. He and his research group isolated—and in some cases also synthesized—an array of substances, which he injected separately into rhesus monkeys. Only one had any observable effect. "Normally the rhesus monkey is quite an aggressive individual," he says. But when injected with this compound, the monkeys became emphatically calm. "Sedated, I would say," he recalls with a chuckle.

Further testing found what the world now knows: This compound is the plant's principal active ingredient, its mind-altering essence—the stuff that makes you high. Mechoulam, along with a colleague, had discovered tetrahydrocannabinol (THC). He and his team also elucidated the chemical structure of cannabidiol (CBD), another key ingredient in marijuana, one that has many potential medical uses but no psychoactive effect on humans.

Now, Israel has one of the world's most advanced medical marijuana programs. Mechoulam played an active role in setting it up, and he's proud of the results. More than 20,000 patients have a license to use cannabis to treat such conditions as glaucoma, Crohn's disease, inflammation, appetite loss, Tourette's syndrome, and asthma.

Despite that, he's not particularly in favor of legalizing cannabis for recreational use. He doesn't think anyone should go to jail for possessing it, but he insists that marijuana is "not an innocuous substance"—especially for young people. He cites studies showing that the prolonged use of high-THC strains of marijuana can change the way the developing brain grows. He notes that in some people cannabis can

provoke serious and debilitating anxiety attacks. And he points to studies that suggest cannabis may trigger the onset of schizophrenia among those who have a genetic predisposition to the disease.

If he had his way, what Mechoulam regards as the often irresponsible silliness of recreational pot culture would give way to an earnest and enthusiastic embrace of cannabis—but only as a medical substance to be strictly regulated and relentlessly researched. “Right now,” he complains, “people don’t know what they’re getting. For it to work in the medical world, it has to be quantitative. If you can’t count it, it’s not science.”

Typically, pharmaceutical companies making cannabis-based medicines have sought to isolate individual compounds from the plant. But Mechoulam strongly suspects that in some cases those chemicals would work much better in concert with other compounds found in marijuana. He calls this the entourage effect, and it’s just one of the many cannabis mysteries that he says require further study.

“We have just scratched the surface,” he says, “and I greatly regret that I don’t have another lifetime to devote to this field, for we may well discover that cannabinoids are involved in some way in all human diseases.”

Group 2: Read about “The Botanist” and answer the following questions in your group.

1. Underline AT LEAST 6 pieces of figurative language in the text. What two things are being compared?
2. What is Hague’s opinion of marijuana? How do you know?
3. What are some of the pros and cons or using marijuana mentioned in the text?

THE BOTANIST
Into the Light

The 44,000-square-foot building hulks across from a police station in an industrial part of Denver, along a gritty stretch of converted warehouses that’s come to be known as the Green Mile. There’s nothing to indicate the nature of the enterprise. The door buzzes open, and I’m met by Philip Hague, the chief horticulturist of Mindful, one of the largest cannabis companies in the world. Philip Hague is a self-described plantsman, a dirty-thumbed gardener since he was eight and a devotee of the great agricultural scientist Luther Burbank. For years Hague grew poinsettias, caladiums, chrysanthemums, and other plants at his family’s nursery in Texas. But now his attentions are lavished on much more lucrative buds.

He leads me through Mindful’s bustling front offices and into its interior corridors. In freezers Mindful stores seeds from all over—Asia, India, North Africa, the Caribbean. A world traveler who’s become something of a Johnny Appleseed for marijuana, Hague is extremely interested in the plant’s historical biodiversity, and his seed bank of rare, wild, and ancient strains is a significant part of Mindful’s intellectual property. “We have to recognize that humans evolved with it practically since the dawn of time,” he says. “It’s older than writing. Cannabis use is part of us, and it always has been. It spread from Central Asia after the last ice age and went out across the planet with man.”

Hague joined Colorado’s green revolution nearly at the beginning. When the U.S. Justice Department announced in 2009 that it would not focus on prosecuting people who complied with state medical marijuana laws, he looked at his wife and said, “We’re moving to Denver.” Now he runs one of the world’s most prominent “grows,” where more than 20,000 cannabis plants thrive.

We file past the curing rooms and down a hallway pulsating with pumps, fans, filters, generators, trimming machines. A forklift trundles by. Surveillance cameras capture everything, as young workers in medical scrubs scurry about, their faces lit with the pressure and promise of an unorthodox business that’s boomed beyond comprehension. Mindful has big plans to expand, building similar facilities in other states. “Pot is hot!” Hague says with a laugh that conveys amazement and exhaustion. “I’m blown away by what’s happening here every single day.”

He throws open an industrial door, and my eyeballs are scalded by a halo of plasma bulbs. We step into an immense, warm room that smells like a hundred Yes concerts. Once my eyes adjust, I can see the crop in

all its rippling glory—close to a thousand female plants standing six feet tall, their roots bathed in a soup of nutrients, their spiky leaves nodding in the breeze of the oscillating fans. Here in a sweep of the eye is more than a half million dollars' worth of artisanal pot. The best parts will be trimmed by hand, dried, cured, and packaged for sale at one of Mindful's dispensaries. "This whole room will be ready for harvest in just a few days," Hague notes.

But Hague has something else he wants to show me. He leads me into a moist propagation room, where a young crop is taking root in near darkness. These babies, tagged with yellow labels, are being grown strictly for medical purposes. They're all clones, cuttings from a mother plant. Hague is proud of this variety, which contains almost no THC but is rich in CBD and other compounds that have shown at least anecdotal promise in treating such diseases and disorders as multiple sclerosis, psoriasis, post-traumatic stress disorder, dementia, schizophrenia, osteoporosis, and amyotrophic lateral sclerosis (Lou Gehrig's disease).

"It's these low-THC strains that really keep me up at night, dreaming about what they can do," Hague says, noting that marijuana contains numerous substances—cannabinoids, flavonoids, terpenes—that have never been investigated in depth.

"It sounds hokey," he says as he caresses one of the cuttings like a gloating father, "but I believe cannabis has a consciousness. It's tired of being persecuted. It's ready to step out into the light."

Group 3: Read "The Biochemist" and answer the following questions in your group.

1. Underline AT LEAST 6 pieces of figurative language in the text. What two things are being compared?
2. What is Guzman's opinion of marijuana? How do you know?
3. What are some of the pros and cons or using marijuana mentioned in the text?

THE BIOCHEMIST
Miracle Cure?

By now nearly everyone has heard that cannabis can play a palliative role for cancer sufferers, especially in alleviating some of the nasty side effects of chemotherapy. But could pot cure cancer? Troll the Internet and you'll see hundreds, if not thousands, of such claims. A gullible Googler could easily believe we're on the brink of a miracle cure.

The majority of these claims are anecdotal at best and fraudulent at worst. But there are also mentions of laboratory evidence pointing to cannabinoids as possible anticancer agents, and many of these reports lead to a lab in Spain run by a thoughtful, circumspect man named Manuel Guzmán.

Guzmán is a biochemist who's studied cannabis for about 20 years. I visit him in his office at the Complutense University of Madrid. "When the headline of a newspaper screams, 'Brain Cancer Is Beaten With Cannabis!' it is not true," he says. "There are many claims on the Internet, but they are very, very weak."

He blinks thoughtfully, then turns to his computer. "However, let me show you something." On his screen flash two MRIs of a rat's brain. The animal has a large mass lodged in the right hemisphere, caused by human brain tumor cells Guzmán's researchers injected. He zooms in. The mass bulges hideously. The rat, I think, is a goner. "This particular animal was treated with THC for one week," Guzmán continues. "And this is what happened afterward." The two images that now fill his screen are normal. The mass has not only shrunk—it's disappeared. "As you can see, no tumor at all."

In this study Guzmán and his colleagues, who've been treating cancer-riddled animals with cannabis compounds for 15 years, found that the tumors in a third of the rats were eradicated and in another third, reduced.

This is the kind of finding that gets the world excited, and Guzmán constantly worries that his breakthrough research may give cancer sufferers false hope—and fuel specious Internet claims. “The problem is,” he says, “mice are not humans. We do not know if this can be extrapolated to humans at all.”

Guzmán leads me around his cramped lab—centrifuges, microscopes, beakers, petri dishes, a postdoc researcher in a white smock extracting tissue from a mouse corpse pinned under bright lights. The lab focuses not just on cancer but also on neurodegenerative diseases and on how cannabinoids affect early brain development. On this last topic the Guzmán group’s research is unequivocal: Mice born of mothers regularly given high doses of THC during pregnancy show pronounced problems. They’re uncoordinated, have difficulty with social interactions, and have a low anxiety threshold—they’re often paralyzed with fear at stimuli, such as a cat puppet placed near their cage, that don’t upset other juvenile mice.

The lab also has studied how the chemicals in cannabis, as well as cannabinoids like the anandamide produced by our bodies, protect our brains against various types of insults, such as physical and emotional trauma. “Our brain needs to remember things, of course,” says Guzmán, “but it also needs to forget things—horrific things, unnecessary things. It’s much like the memory in your computer—you have to forget what is not necessary, just like you need to periodically delete old files. And you have to forget what is not good for your mental health—a war, a trauma, an aversive memory of some kind. The cannabinoid system is crucial in helping us push bad memories away.”

But it’s Guzmán’s brain tumor research that has captured headlines—and the interest of pharmaceutical companies. Through his years of research he has ascertained that a combination of THC, CBD, and temozolomide (a moderately successful conventional drug) works best in treating brain tumors in mice. A cocktail composed of these three compounds appears to attack brain cancer cells in multiple ways, preventing their spread but also triggering them, in effect, to commit suicide.

Guzmán cautions against overoptimism, though. “We have to be objective,” he says. “At least the mind-set is opening around the world, and funding agencies now know that cannabis, as a drug, is scientifically serious, therapeutically promising, and clinically relevant.”

Will cannabis help fight cancer? “I have a gut feeling,” he says, “that this is real.”

Group 4: Read “The Caregiver” and answer the following questions in your group.

1. Underline AT LEAST 6 pieces of figurative language in the text. What two things are being compared?
2. What is the Patricks’ opinion of marijuana? How do you know?
3. What are some of the pros and cons or using marijuana mentioned in the text?

THE CAREGIVER
Medical Migrants

The seizures started in May 2013 when she was six months old. Infantile spasms, they were called. It looked like a startle reflex—her arms rigid at her side, her face a frozen mask of fear, her eyes fluttering from side to side. Addelyn Patrick’s little brain raced and surged, as though an electromagnetic storm were sweeping through it. “It’s your worst possible nightmare,” her mother, Meagan, says. “Just awful, awful, awful to watch your child in pain, in fear, and there’s nothing you can do to stop it.”

From their small town in southwestern Maine, Meagan and her husband, Ken, took Addy to Boston to consult with neurologists. These epileptic seizures, they concluded, were the result of a congenital brain malformation called schizencephaly. One of the hemispheres of Addy’s brain had not developed fully in utero, leaving an abnormal cleft. By summer Addy was having 20 to 30 seizures a day. Then 100 a day. Then 300. “Everything was misfiring all at once,” says Meagan. “We were afraid we were going to lose her.”

When Meagan's in-laws suggested they look into medical marijuana, she recoiled. "This is a federally illegal drug we are talking about," she recalls thinking. But she did her own research. A good deal of anecdotal evidence shows that high-CBD strains of cannabis can have a strong antiseizure effect.

So, in 2013, Meagan went to Colorado and met with parents whose epileptic children were taking a strain of cannabis called Charlotte's Web, named for a little girl, Charlotte Figi, who'd responded astonishingly well to the low-THC, high-CBD oil produced near Colorado Springs.

What Meagan saw in Colorado impressed her—the growing knowledge base of cannabis producers, the kinship of parents coping with similar ordeals, the quality of the dispensaries, and the expertise of the test labs in ensuring consistent cannabis-oil formulations. Colorado Springs had become a mecca for a remarkable medical migration. More than a hundred families with children who had life-threatening medical conditions had uprooted themselves and moved. These families, many of them associated with a nonprofit organization called the Realm of Caring, consider themselves "medical refugees." Most couldn't medicate their children with cannabis in their home states without risking arrest for trafficking or even child abuse.

Meagan experimented with high-CBD oil. The seizures all but stopped. She weaned Addy off some of her other meds, and it was as though she'd come back from a coma. "It sounds like a small thing," says Meagan. "But if you have a child who smiles for the first time in many, many months, well, your whole world changes."

By early last year the Patricks had made up their minds. They would move to Colorado to join the movement. "It was a no-brainer," Meagan says. "If they were growing something on Mars that might help Addy, I'd be in my backyard building a spaceship."

When I meet the Patricks in late 2014, they'd settled into their new home on the north side of Colorado Springs. Addy is thriving. Since first taking CBD oil, she hasn't been hospitalized. She still has occasional seizures—one or two a day—but they're less intense. Her eyes wander less. She listens more. She laughs. She's learned how to hug and has discovered the power of her vocal cords.

Critics contend that the Realm of Caring parents are using their kids as guinea pigs, that not enough studies have been done, that many, if not most, of the claims can be dismissed as the result of the placebo effect. "It's true, we don't know the long-term effects of CBD, and we should study it," Meagan says. "But I can tell you this. Without it, our Addy would be a sack of potatoes."

Thiele says early results of the CBD study are extremely encouraging. "CBD is not a silver bullet—it doesn't work for everybody," she cautions. "But I'm impressed. It clearly can be a very effective treatment for many people."

The Patricks are in a good place now—happier than they've been in years. "We have Addy back again," Meagan says. "If I wasn't living through this, I don't know that I'd believe it myself. I don't feel like cannabis is a miracle cure. But I feel like it should be a tool in every neurologist's toolbox, all around the country."

Group 5: Read "The Geneticist" and answer the following questions in your group.

1. Underline AT LEAST 6 pieces of figurative language in the text. What two things are being compared?
2. What is Kane's opinion of marijuana? How do you know?
3. What are some of the pros and cons or using marijuana mentioned in the text?

THE GENETICIST
Building the Map

We're standing in a laboratory greenhouse on the campus of the University of Colorado Boulder looking at ten hemp plants that Kane recently procured for research purposes. They're spindly, stalky little things, like gangling teenagers. These plants, like nearly all hemp varieties, carry extremely low levels of THC.

They may not look threatening, but their very presence here, in the confines of a major university lab, represents years of wrangling to win federal and university approval. Right now, Kane's allowed to grow only hemp strains. The rest of his research material is cannabis DNA, which is supplied by Colorado growers who extract it using methods he's taught them.

Kane fingers one of his innocuous-looking plants, expressing mild bemusement at the U.S. ban on commercial hemp cultivation. "Hemp produces fibers of unparalleled quality," he notes. "It's a tremendously high biomass crop that replenishes the soil and doesn't require much in terms of inputs. We import tons and tons of hemp each year from China and even Canada, yet as a matter of federal policy, we can't legally grow it. There are places where farmers in the U.S. can literally look across the Canadian border and see fields that are yielding huge profits."

A geneticist, Kane studies cannabis from a unique perspective—he probes its DNA. He's an affable, outdoorsy guy with a bright face and eyes that wander and dart inquisitively when he talks. He has studied chocolate and for many years the sunflower, eventually mapping its genome, a sequence of more than three and a half billion nucleotides. Now he's moved on to marijuana. Though its sequence is much shorter, roughly 800 million nucleotides, he considers it a far more intriguing plant.

A sketchy outline of the cannabis genome already exists, but it's highly fragmented, scattered into about 60,000 pieces. Kane's ambitious goal, which will take many years to achieve, is to assemble those fragments in the right order. "The analogy I use is, we have 60,000 pages of what promises to be an excellent book, but they're strewn all over the floor," he says. "We have no idea yet how those pages fit together to make a good story."

Many people are more than a little eager to learn how Kane's story will play out. "There's a certain pressure," he says, "because this work will have huge implications, and anything we do in this lab will be under a lot of scrutiny. You can feel it. People are just wanting this to happen."

Once the map is complete, enterprising geneticists will be able to use it in myriad ways, such as breeding strains that contain much higher levels of one of the plant's rare compounds with medically important properties. "It's like discovering some hidden motif deep in a piece of music," Kane says. "Through remixing, you can accentuate it and turn it up so that it becomes a prominent feature of the song."

As Kane leads me around his lab, I see the excitement on his face and on the faces of his young staff. The place feels almost like a start-up company. "So much of science is incremental," he says, "but with this cannabis work, the science will not be incremental. It will be transformative. Transformative not just in our understanding of the plant but also of ourselves—our brains, our neurology, our psychology. Transformative in terms of the biochemistry of its compounds. Transformative in terms of its impact across several different industries, including medicine, agriculture, and biofuels. It may even transform part of our diet—hemp seed is known to be a ready source of a very healthy, protein-rich oil."

Cannabis, Kane says, "is an embarrassment of riches."

Homework: Read the following article and answer the questions below:

1. Underline AT LEAST 6 examples of figurative language. What two things are being compared?
2. What is the author's opinion towards green energy? How do you know?
3. According to the article, what problems does green energy face?

Dark Days for Green Energy

By KATE GALBRAITH, The New York Times, FEB. 3, 2009

Wind and solar power have been growing at a blistering pace in recent years, and that growth seemed likely to accelerate under the green-minded Obama administration. But because of the credit crisis and the broader economic downturn, the opposite is happening: installation of wind and solar power is plummeting.

Factories building parts for these industries have announced a wave of layoffs in recent weeks, and trade groups are projecting 30 to 50 percent declines this year in installation of new equipment, barring more help from the government.

Prices for turbines and solar panels, which soared when the boom began a few years ago, are falling. Communities that were patting themselves on the back just last year for attracting a wind or solar plant are now coping with cutbacks.

“I thought if there was any industry that was bulletproof, it was that industry,” said Rich Mattern, the mayor of West Fargo, N.D., where DMI Industries of Fargo operates a plant that makes towers for wind turbines. Though the flat Dakotas are among the best places in the world for wind farms, DMI recently announced a cut of about 20 percent of its work force because of falling sales.

After years when installers had to badger manufacturers to ensure they would receive enough panels, the situation has reversed. Bill Stewart, president of SolarCraft, a California installer, said that manufacturers were now calling to say, “Hey, do you need any product this month? Can I sell you a bit more?”

The turnaround reflects reduced demand for solar panels, and also an increase in supply of panels and of polysilicon, a crucial material in many panels. On the wind side, turbines that once had to be ordered far in advance are suddenly becoming available.

“At least one vendor has said that they have equipment for delivery in 2009, where nine months ago they wouldn’t have been able to take new orders until 2011,” Mr. Mataczynski of Renewable Energy wrote in an e-mail message. As he has scaled back his company’s plans, he has been forced to cancel some orders for wind turbines, forfeiting the deposit.

Banks have invested in renewable energy, lured by the tax credits. But with banks tightly controlling their money and profits, the main task for the companies is to find new sources of investment capital.

Wind and solar companies have urged Congress to adopt measures that could help revive the market. But even if a favorable stimulus bill passes, nobody is predicting a swift recovery.

“Nothing Congress does in the stimulus bill can put the market back where it was in 2007 and 2008, before it was broken,” said Mr. Martin, the tax lawyer with Chadbourne & Parke. “But it can help at the margins.”

The solar and wind tax credits are structured slightly differently, but the House version of the stimulus bill would help both industries by providing more immediate tax incentives, alleviating some of their dependency on banks.

Both House and Senate would also extend an important tax credit for wind energy, called the production tax credit, for three years; previously the industry had complained of boom-and-bust cycles with the credit having to be renewed nearly every year.

Over the long term, with Mr. Obama focused on a concerted push toward greener energy, the industry remains optimistic.

“You drive across the countryside and there’s more and more wind farms going up,” said Mr. Mattern of West Fargo. “I still have big hopes.”

Reading Lesson 3

Adapted from: https://allpoetry.com/poem/11792745--Definitions---for-figures-of-speech-by-Justin-Kelly777

**__Metonymy__: a word or phrase that is used to stand in for another word (a reference)

	Definition	Example Sentence	Explanation
Type 1	Part Refers to Whole	There are two **mouths** to feed in my family.	"Mouth" refers to "person"
Type 2	Whole Refers to Part	**The U.S**. won the gold medal in gymnastics at the Olympics.	"the U.S." refers to the "U.S. gymnastics team," not the whole country
Type 3	Producer Refers to Product	Our company just bought a new **Xerox machine**.	"Xerox" is the name of a company that produces copy machines; "Xerox machine" refers to "copy machine"
Type 4	Object Refers to User	The **crown** ordered all soldiers to arms.	"crown" refers to "king"
Type 5	Institution refers to person(s) in charge	The **Pentagon** announced its new policy yesterday.	Pentagon refers to chiefs of staff at the Pentagon
Type 6	Place refers to Institution (in the place)	**Washington (D.C.)** petitions **Beijing**.	Washington refers to U.S. government; Beijing = Chinese government
Type 7	Place refers to an Event (that occurred or occurs there)	Remember the **Alamo**!	Alamo refers to the battle at Alamo, Texas, USA
Type 8	Controller refers to controlled person/thing	**Usama bin Laden** attacked the World Trade Center in New York.	Usama bin Laden refers to AlQaida forces
Type 9	Container refers to material inside container	She's planning to serve the **dish** early in the evening.	"dish" refers to the "food" on the plate

Exercise A: Underline the metonymy in each sentence below. Then, next to the sentence write the number for the type of Synecdoche or Metonymy. Finally, write what the word represents.

Example: __1__ God bless the **hands** that prepared this food. (hand refers to person)

1. _____Could you pass me a Kleenex?
2. _____The White House called a press conference.
3. _____Pearl Harbor was a sad event in America's History.
4. _____ I count twenty heads at the party.
5. _____ The White House called a press conference.
6. _____ The pen is mightier than the sword.
7. _____ Houston defeated L.A in basketball last night.
8. _____ Bill Gates is the king of operating systems worldwide
9. _____ The cup is quite tasty!

10. _____ Can you please give me a hand carrying this box up the stairs?

**Why use metonymy?

1) allows writers and speakers to refer to complicated concepts or large groups of people with a single world

2) also helps to create a quick mental image by using everything that the **metonym** evokes

For example, which sentence below sounds better?

*"We cannot only have a plan for **Wall Street**…We must also help **Main Street**."*

*"We cannot only have a plan for wealthy bankers and moneyed financial institutions…We must also help the average person who is more likely to live in a small town and not own a **yacht**."*

Exercise B: Look at the headlines below. Circle one word in each headline that is a synecdoche or metonymy. What does each word represent?

1. New York Unveils Climate Change Plans
2. U.S., China to Announce Steps to Fight Climate Change
3. White House honors 12 faith leaders as climate-change 'champions'
4. Scotland Yard Investigates a Murder
5. The White House Defends Health Law
6. Vatican to Host Meetings on Climate Change

Reading:

1. **Look at the title of the article below. What kind of metonymy is being used here?**
2. **As you read the article, underline any examples of figurative language that you see.**

Vatican Was Going Green Long Before Pope's Climate Decree
(By Craig Welch, National Geographic, June 16, 2015)

Pope Francis is eloquent and driven, but is just the latest in a line of Catholic leaders attempting to push environmental issues higher on the church agenda.

Pope Francis's long-awaited letter on the environment, officially released Thursday, marks a milestone in conservation: The leader of 1.2 billion Catholics is articulating a formal case that cleaning up the earth and curbing global warming are moral imperatives.

"Climate change is a global problem with grave implications: environmental, social, economic, political and for the distribution of goods," the pope wrote in his encyclical, the most significant decree a pope can issue. "It represents one of the principal challenges facing humanity in our day."

From Pope John Paul II's pleas to respect nature a quarter-century ago to the Vatican's increasingly sophisticated relationship with science, the Roman Catholic Church has been moving for decades to take environmental issues seriously. And Pope Francis, a former chemist

with a deep concern for the poor, seems intent on demonstrating that climate change—the ultimate "green" issue—is about more than saving polar bears.

"Climate change raises existential questions: What is our proper relationship to other human beings, to future generations, to the natural world?" says Anthony Leiserowitz, Director of the Yale Project on Climate Change Communication. "This isn't just about loving creation, but about harming millions of people," he says, “the very people whose lives Christians have been told they need to devote themselves to improving."

The Vatican may be best known for entering the political fray when speaking out against abortion or gay marriage (even Thursday’s encyclical reiterates the church’s criticism of abortion). But Catholicism has long transcended political boundaries.

Owners and Dominators

The pope addressed his encyclical to “every person living on the planet.” It suggests greenhouse gas emissions from the wealthier northern hemisphere are largely responsible for global warming, which threatens the less fortunate to the south, through searing temperatures and water and crop shortages.

“Many of the poor live in areas particularly affected by phenomena related to warming, and their means of subsistence are largely dependent on natural reserves and ecosystemic services such as agriculture, fishing and forestry,” the pope wrote. “They have no other financial activities or resources which can enable them to adapt to climate change or to face natural disasters, and their access to social services and protection is very limited.”

The encyclical urges the world to change direction, reduce consumption and unite to fix the problem: “Humanity is called to take note of the need for changes in lifestyle and changes in methods of production and consumption to combat this warming, or at least the human causes that produce and accentuate it.”

The Vatican's Solar Panels

The church solicits advice from its own academy of scientists, which comprises Nobel Prize winners and top global thought leaders such as Ramanathan, some of whom are atheists or practitioners of other faiths.

In fact, it was Benedict who was known as the first "Green Pope." He not only embraced the threat posed by climate change, but pushed nearly a decade ago to try and make the Vatican carbon-neutral. He installed solar panels on a Vatican hall and sought a hybrid popemobile.

"From way, way back in the theological tradition, there has been an emphasis on avoiding the excessive use of the goods of the earth," says James Schaefer, a professor of theology at Marquette University who focuses on links between ecology and religion.

Papal Megaphone

With the United Nations this winter bringing heads of state to Paris in hopes of reaching binding agreements to reduce fossil fuel emissions, the Vatican sees 2015 as a pivotal year for it to wield influence.

Already, nearly 70 percent of Catholics believe global warming is happening, more than Americans as a whole, says Leiserowitz. Among those Catholics, 57 percent believe humans are responsible. But very few people regard climate change as a moral or human health issue, regardless of their religious persuasion. "And that's understandable," Leiserowitz says. "The dominant photo by far that editors go to on climate change stories is a picture of melting ice. But most people don't live next to Antarctica or the Arctic or next to a melting glacier."

Leiserowitz suspects changing that paradigm might help get more people engaged. And nobody has a megaphone like the pope. "He has an infrastructure," Leiserowitz says. "There are churches and diocese all over the world. Hundreds of millions of people visit his institutions every week. That's a power no environmental group could even dream of."

Discussion:

1. What kinds of figurative language did you find in the article? What is the effect of using figurative language?

2. Do you agree with the pope that environmental conservation is an ethical issue? Why or why not?

Appendix K: Metaphor and Metonymy Lessons: Listening

Listening Lesson 1

Activity A: Watch the video, “Metaphorically Speaking,” (first two and a half minutes only) and answer the questions below. (James Geary: https://www.ted.com/talks/james_geary_metaphorically_speaking)

1. When speaking, how many metaphors do we use per minute?

2. What four metaphors do you find in Elvis’s song, All Shook Up?

_____

3. What famous Shakespeare metaphor does the speaker mention?

_____

Activity B:

Listen to the entire song, “All Shook Up,” and underline all the metaphors below. What is the effect of using metaphors in this song?

A well' a bless my soul
What's a wrong with me?
I'm itchin' like a man in a fuzzy tree
My friends say I'm actin' wild as a bug
I'm in love
I'm all shook up
Mm mm mm, mm, yay, yay, yay

Well, my hands are shaky and my knees are weak
I can't seem to stand on my own two feet
Who do you think of when you have such luck?
I'm in love
I'm all shook up
Mm mm mm, mm, yay, yay, yay

Well, please don't ask me what's a on my mind
I'm a little mixed up, but I'm feelin' fine
When I'm near that girl that I love best
My heart beats so it scares me to death!

Well she touched my hand what a chill I got
Her lips are like a volcano when it's hot
I'm proud to say that she's my buttercup
I'm in love
I'm all shook up
Mm mm mm, mm, yay, yay, yay

My tongue gets tied when I try to speak
My insides shake like a leaf on a tree
There's only one cure for this body of mine
That's to have that girl that I love so fine!

She touched my hand what a chill I got
Her lips are like a volcano that's hot
I'm proud to say that she's my buttercup
I'm in love
I'm all shook up
Mm mm mm, mm, yay, yay, yay
Mm mm mm, mm, yay, yay
I'm all shook up

Activity C:

Fill in the chart below. Why did you choose those nouns and adjectives? Discuss with a partner.

Write a Noun	Write an Adjective
Life is . . .	Life is . . .
Life is . . .	Life is . . .
Life is . . .	Life is . . .

Activity D: Now look at the sentences below. Under each group of sentences, fill in the blanks with a noun to show the information from the groups of sentences. How do the different groups of sentences reflect different attitudes about life?

1. I'm exactly ***where I want to be*** in life.
2. He told his children over and over that a person can ***go far in life*** if he get a good education, works hard, and helps his community.
3. She's really ***gone through*** a lot in life.

Life is _____.

1. Where people are born is just ***luck of the draw***, and yet it affects so many aspects of their lives.
2. Influential people can really support you if you ***play your cards right***.
3. Sometimes you just have to ***play the hand you've been dealt*** - even if you weren't ***dealt*** any at all!

Life is _____.

1. His life ***contained*** a great deal of sorrow.
2. The real point, he says, is to ***live life to the fullest***, regardless of what fate has put in the way.
3. Her life is ***crammed*** with activities.

Life is _____.

1. He and his wife are working now and living in a house, but ***life*** remains a ***struggle***, the future uncertain.
2. And the latest issue features a wide-ranging conversation with President Barack Obama, who according to Jann Wenner is gearing up for the ***fight*** of his ***life***.
3. ***Life*** is an ***uphill battle*** for Mildred Clark and her mother Ruby, who suffers from Alzheimer's disease and the burden of poverty.

Life is _____.

Activity E: Now, thinking about yourself, draw a map below to represent your life starting with your birth and going into the future. Has it been a ***bumpy road***, or were you able to ***coast by*** without any problems? What about your career path in the future? When you're finished, share your maps with your groups.

Activity F: Thinking about your own life, fill in the chart below with AT LEAST 5 items in each box. Which metaphor describes your own life the best? When you finish, discuss with your group.

	How is it similar to your life?	How might thinking about your life like this affect your actions and decisions?
A Journey?		
A Game?		
A Container?		
A Battle?		
Something else?		

Activity G: Look at the lyrics and listen to the song, "Life is a highway." Underline all the metaphors you can find in the song. Why do you think the writer chose to use those metaphors? What is his attitude towards life?

Whooo umm yeah...
Life's like a road that you travel on
When there's one day here and the next day gone
Sometimes you bend, sometimes you stand
Sometimes you turn your back to the wind
There's a world outside ev'ry darkened door
Where blues won't haunt you anymore
Where brave are free and lovers soar
Come ride with me to the distant shore
We won't hesitate
To break down the garden gate
There's not much time left today

[Chorus:]
Life is a highway
I wanna ride it all night long
If you're going my way
I wanna drive it all night long

Through all these cities and all these towns
It's in my blood and it's all around
I love you now like I loved you then
This is the road and these are the hands
From Mozambique to those Memphis nights
The Khyber Pass to Vancouver's lights

Knock me down get back up again
You're in my blood
I'm not a lonely man
There's no load I can't hold
Road so rough this I know
I'll be there when the light comes in
Just tell 'em we're survivors

[Chorus]
Gimme gimme gimme gimme yeah

[Chorus]

There was a distance between you and I (between you and I)
A misunderstanding once
But now we look it in the eye

Ooooo...Yeah!

There ain't no load that I can't hold
Road so rough this I know
I'll be there when the light comes in
Just tell 'em we're survivors

[Chorus: (x3)]
Life is a highway
I wanna ride it all night long
If you're going my way
I wanna drive it all night long

Gimme gimme gimme gimme yea

Listening Lesson 2

The Global Food Waste Scandal

Tristam Stewart:
https://www.ted.com/talks/tristram_stuart_the_global_food_waste_scandal

Before Watching: Discuss the following with a partner.

1) Have you heard the term "food waste"? What do you think it means?
2) How much food do you throw out each week? What kinds of food do you throw away?
3) Can you think of any methods for reducing food waste?

Video, Part 1: Introduction (0:00 -2:14)

1) How did the speaker feed his pigs? What did he learn from this?
2) Underline the figurative language in the following two sentences from the Ted Talk. Why does the speaker use these metaphors?

"But I noticed that most of the food that I was giving my pigs was in fact fit for human consumption, and that I was only scratching the surface, and that right the way up the food supply chain, in supermarkets, greengrocers, bakers, in our homes, in factories and farms, we were hemorrhaging out food."

Video Part 2: Statistics (2:11-7:23)

1) What do the graphs show?
   a. That most countries produce have more food that they consume.
   b. That a country like America has four times the amount of food it needs.
   c. That some poor countries do not have enough food to feed their population.
   d. All of the above.
2) The speaker throws out 5 biscuits. What does each biscuit represent?
3) Why does the speaker use biscuits to represent the food supply? How is this more effective than giving the audience numbers directly?

Video Part 3: Food Waste Examples (7:23 – 11:26)

1) The speaker shows seven pictures of food waste. List them below:
   a) _____
   b) _____
   c) _____
   d) _____
   e) _____
   f) _____
   g) _____
2) What story does the speaker tell about his visit to Kashgar? Why does he include this anecdote in his talk?

Video Part 4: Conclusion (11:26 – end)

1) What does the speaker think we should do with our food waste?

2) At the end of his talk, what does the speaker say is the "silver lining"?

Discussion:

1) What is the main idea of this Ted Talk?
2) What kinds of gestures does the speaker make during his presentation? Why?
3) What kinds of food are wasted here in the United States? What can be done to minimize food waste in the United States?

Radio Role-Play:

Person A: You are a radio host here in the United States. Introduce your guest and ask him questions about food waste problems in Ecuador and how to solve them.

Person B: You are Tristram Stuart, an expert on food waste. Give some information and advice on food waste in the United States.

Listening Lesson 3: EFL Group

Let the Environment Guide Our Development

Johan Rockstrom:
https://www.ted.com/talks/johan_rockstrom_let_the_environment_guide_our_development

Before Watching: Discussion

1. What are the biggest environmental problems facing the world today? What are the biggest environmental problems facing Ecuador?
2. What can be done to address these issues?

Exercise A: Watch the video without any sound. What kind of gestures does the speaker make? Why? Then watch it again with sound. Were you right?

Part 1 (0:10-0:55):

_____
_____

Part 2 (2:01-2:22):

_____
_____

Part A: (0:10-4:11)

1. Why does the speaker bring an inflatable globe of the world on stage with him?

2. What is the "quadruple squeeze" on planet earth? What information and examples does the speaker give for each pressure on the planet?

a. _____

b. _____

c. _____

d. _____

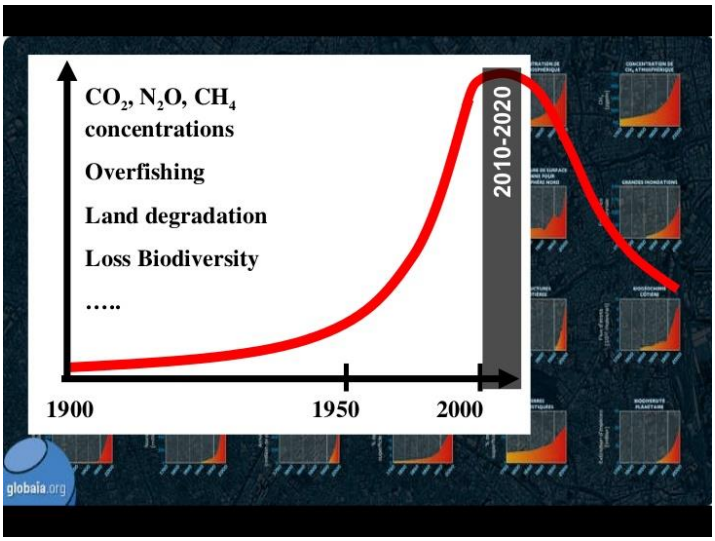
3. Why does the speaker sit on the inflatable globe during his presentation?

_____

Part B (4:11-8:08)

1. What does this chart show? What does the speaker mean we he says “we may have come to the point where we have to bend the curves?”

_____



2. Why does the speaker fall off the stage? What two examples does he give of ecological systems becoming unstable and “tipping over?”

a. _____

b. _____

3. Why does the speaker show the picture of the waterfall? What does it represent?

_____

Part C (8:09-11:32)

1. What nine planetary boundaries does the speaker identify? Which thresholds have we already crossed?

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

i. _____

2. Why does the speaker say the boundaries are like “The Three Musketeers”?

_____

Part D (11:33-17:13)

1. What does the speaker say needs to happen to improve our current situation?

_____

2. What three examples does the speaker give of success stories?

a. Latin America:

_____

b. Great Barrier Reef:

_____

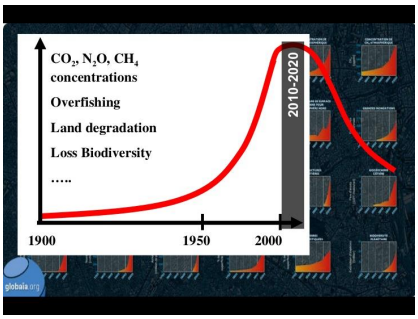
c. Sweden:

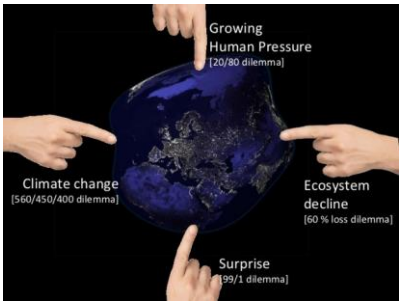
_____

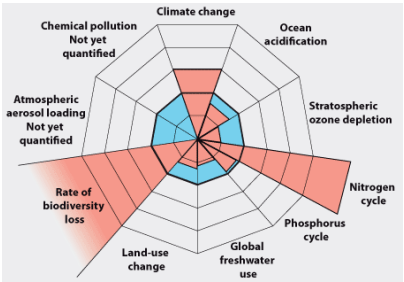
3. What kind of gestures does the speaker use throughout his presentation? What makes them effective?

_____

Exercise B: Work with a partner. Use the charts and pictures below to summarize the presentation you just watched.







Listening Lesson 3: ESL Group

Turning Powerful Stats into Art

Chris Jordan: https://www.ted.com/talks/chris_jordan_pictures_some_shocking_stats

Part 1: Watch the Video and Take Notes on the Topics Below

Image 1:

What is it made of?

What does it represent?

What are the statistics?

Image 2:

What is it made of?

What does it represent?

What are the statistics?

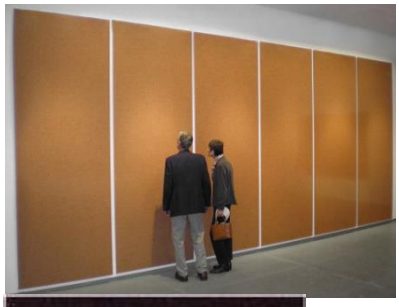


Image 3:

What is it made of?

What does it represent?

What are the statistics?

Image 4:

What is it made of?

What does it represent?

What are the statistics?

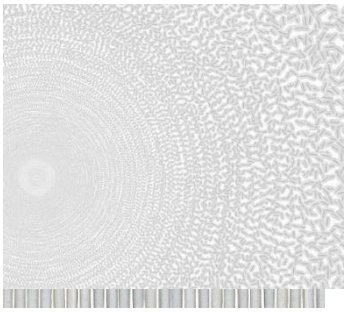


Image 5:

What is it made of?

What does it represent?

What are the statistics?

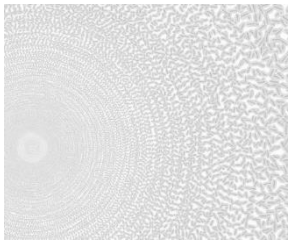


Image 6:

What is it made of?

What does it represent?

What are the statistics?

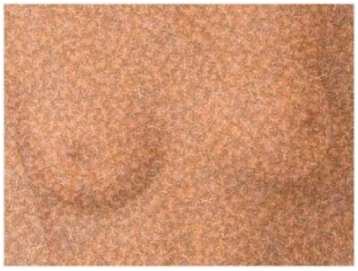


Image 7:

What is it made of?

What does it represent?

What are the statistics?

Discussion Questions:

1. What issues in the U.S. does the speaker discuss through his artwork? What do you know about these problems?

2. The speaker says, “What I’m trying to do with my work is to take these numbers, these statistics from the raw language of data, and to translate them into a more universal visual language that can be felt.” What do you think he means by “visual language?” How is this different from other types of language?

3. What is the main idea of the TED Talk?

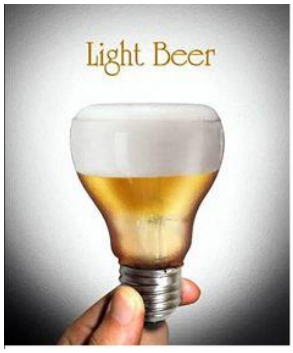
4. Choose ONE idea from the TED Talk and give a response.

5. If you could make images about issues in your own country, what issues would you choose? What kind of images would you make?

Appendix L: Metaphor and Metonymy Lessons: Writing

Writing Lesson 1:

Warm-Up: Look at the advertisements below. What two things does each advertisement combine to create something new? What is the effect of these combinations?



Activity 1: Writing Creative Metaphors

Directions: First, make three sets of cards: a set of adjectives, a set of concrete nouns, and a set of abstract nouns. Mix up the cards and take turns putting them in this order:

(adjective) + (concrete noun) of (abstract noun)

Example: the delicious apple of thought

Write down your three favorite combinations here:

1._____

2._____

3._____

Now, choose one of your combinations and draw a picture below:

Finally, write a short, one-paragraph story that includes your new metaphor.

_____

_____

_____

_____

_____

_____

Activity 2: Environmental Campaign with Slogan

Directions: In groups, use one of the pictures below to create an advertising campaign for an environmental issue. To go with your picture, your group should make a 2 minute commercial that includes the following:

- A Campaign Slogan that Includes a Metaphor
- Short Explanation of Your Problem/Issue
- An Action that People Can Take to Help Alleviate the Problem

Homework: Design your own advertisement for another environmental issue. Your advertisement must include a picture and a metaphor. In class, your group will share your new advertisement with a 2 minute commercial and then explain your picture. Brainstorm your ideas below:

Environmental Issue: _____

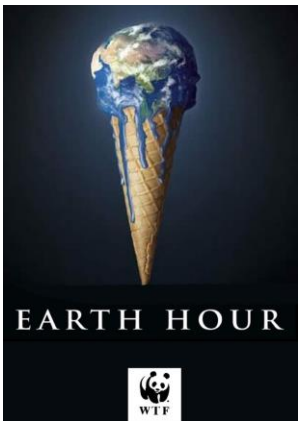
Metaphor: _____

For your commercial, you should include the following:

- An Advertisement with a Picture and a Metaphor
- A Campaign Slogan that Includes a Metaphor
- Short Explanation of Your Problem/Issue
- An Action that People Can Take to Help Alleviate the Problem

After your commercial, your group should explain your picture, the metaphor you chose, and what makes it an effective advertisement for your issue.

Issue 1: Climate Change/Global Warming

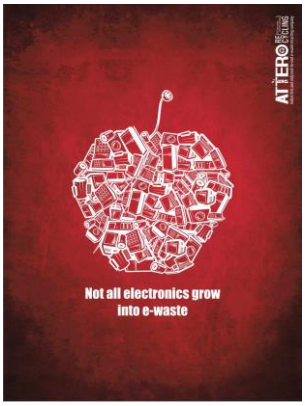


Issue 2: Waste in the Ocean

Issue 3: Deforestation

Issue 4: Saving Animals

Issue 5: Recycling



Writing Lesson 2:

Part 1: Free Writing

Choose one of the topic sentences below and write a short paragraph about yourself.

1. So far, my life has been an exciting journey.
2. Love is magic.
3. My brain is like a computer.

_____

_____

_____

_____

_____

_____

_____

Part 2: Analyzing and Responding to Other Writers

Read and discuss the quotes below with a partner. What metaphor does each speaker use?

The pace of global warming is accelerating and the scale of the impact is devastating. The time for action is limited - we are approaching a tipping point beyond which the opportunity to reverse the damage of CO2 emissions will disappear. **Eliot Spitzer (U.S. politician)**	In Europe, where climate change absolutism is at its strongest, the quasi-religion of greenery in general and the climate change issue in particular have filled the vacuum of organised religion, with reasoned questioning of its mantras regarded as a form of blasphemy. **Nigel Lawson (UK politician)**
To be clear, climate change is a true 800 pound gorilla in the room. The effects of global warming threaten global environmental upheaval over the coming century. But for South Florida and the Everglades, it could be our death knell if urgent action is not taken. **Debbie Wasserman Schultz (U.S. politician)**	Billions of dollars of grant money [over $50 billion] are flowing into the pockets of those on the man-made global warming bandwagon. No man-made global warming, the money dries up. This is big money, make no mistake about it. Always follow the money trail and it tells a story. **James Spann (American Meteorologist)**
The first thing that is not obvious to people is global warming is a less-than-1% effect. It's like being shortchanged at the bank by a penny every dollar. Over a long period of time with lots of transactions, that piles up. **Nathan Myhrvold (Microsoft Businessman)**	Marxism, Freudianism, global warming. These are proof - of which history offers so many examples - that people can be suckers on a grand scale. To their fanatical followers they are a substitute for religion. Global warming, in particular, is a creed, a faith, a dogma that has little to do with science. **Paul Johnson (Historian)**

Writing: Choose one quote and write two paragraphs. In the first paragraph, you should analyze the author's point of view and describe the metaphor he uses. In the second paragraph, give your own opinion and response to the quote.

_____
_____
_____
_____
_____
_____
_____
_____
_____

Individual Quotes

Think about the topic of your source-based essay. Choose either your topic or an important concept related to it. Make your own metaphor and write your own quote in the space below.

Topic/Concept: _____

Metaphor:_____

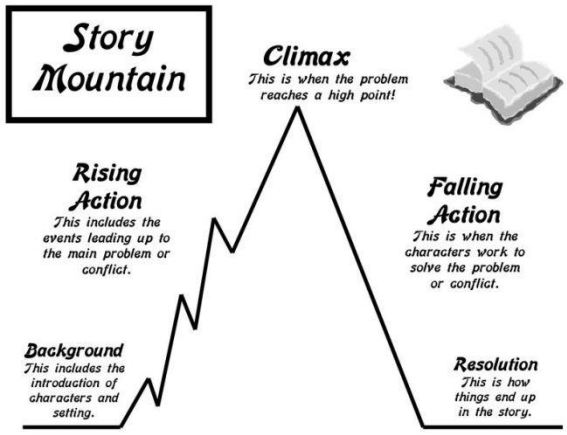
Quote:_____
_____
_____

HW: Write one paragraph explaining the quote you wrote and the metaphor you chose. How does the metaphor strengthen and express your opinion?

_____
_____
_____
_____
_____
_____

Writing Lesson 3:

Warm-Up: What are the parts of a story?



Writing: Story Chains

Choose one of the prompts below. Start writing for 5 minutes, and then pass to the student next to you to continue. We will do this 5 times.

1. It all started when I was walking to school. I was waiting to cross a street when I looked down, and there it was: an envelope, with thousands of dollars inside. . .

2. _____was sitting in class on a Friday afternoon, when her teacher said something that made her sit up. "Your assignment," he said, "is to earn one million dollars, and bring it to class on Monday."

3. I thought it was just a normal day, but as soon as I arrived at Ikiam I noticed that . . .

4. When _____ woke up on Wednesday morning, he thought it was just another day, as usual. He got dressed, ate breakfast, and prepared to go to school. When he went outside, however, he realized that something, was very, very different. . .

Improving your Story:

Step 1: Read your complete story.

Step 2: Pass to another student. They should read, draw a line, and label each part of the story (introduction, conflict, climax, resolution).

Step 3: Pass to another student. They should read and circle all details and descriptions in the story. Did you use any figurative language?

Step 4: The group discusses how to improve plot and where to add details and descriptions.

Step 5: Editing/revising. Improve plot and add details and descriptions. You MUST add at least 5 new similes or metaphors.

Step 6: Share stories with someone from another group. Get more suggestions for your story.

Homework: Continue to edit and revise your story. Make sure to add details and description, and use at least 4 figurative expressions in your final draft.

Appendix M: Metaphor and Metonymy Lessons: Speaking

Speaking Lesson 1

Adapted from: http://www.really-learn-english.com/simile-and-metaphor.html

1) Simile

A simile is a word or phrase that compares two different things that do not usually go together. It uses the words **like** or **as**.

Examples of similes:

- eat like a pig
- sleep like a baby
- as cute as a kitten
- as white as snow

How to form a simile

There are two ways to form a simile.

1. as + adjective/adverb + as + noun

2. verb + like + noun

Practice 1: Add a subject to the beginning of each simile to make the sentence complete. How many creative new sentences can you think of?

1. as cold as ice.
2. as light as a feather
3. as slow as a turtle
4. as quiet as a mouse
5. eats like a pig
6. sings like an angel
7. runs like a cheetah
8. slept like a baby

Practice 2: Change the underlined word to make a creative new simile. How many new similes can you make?

1. She has been as quiet as a church mouse.
2. Then I can fly like an eagle.
3. It's as flat as a pancake.
4. He's as strong as a bull.
5. He eats like a pig.
6. He eats like a bird.
7. It's as hard as a rock.
8. It's as sweet as honey.
9. Your hands are as cold as ice.
10. It's as sharp as a knife.
11. She's as gentle as a lamb.
12. It's as old as the hills.

2) Metaphor

A metaphor is a comparison of two different things, without "like" or "as."

Examples of metaphors:

- My hands are ice. (My hands feel very cold)
- My plan was a house of cards (= as fragile and unstable as a house of cards)

How to form a metaphor
The simplest way to make a metaphor is to use this pattern:

First noun + to be verb + a/an + second noun

- She is an angel.
  (She is a nice.)
- He is a pig.
  (He is messy.)

- The stars were a blanket over the earth.
  (The stars filled the night sky above the earth.)

- The classroom was a zoo.
  (The classroom was noisy and the kids are not in their seats.)

Not all metaphors are written in the simple pattern like those above.

Here are a few more examples of metaphors. Even though they are not written in the same pattern, they do compare two different nouns.

- My boss fired the snake.
  (The employee is being compared to a snake. The boss fired an employee who was sneaky and not trustworthy.)

- He has a heart of stone.
  (His heart is being compared to a stone. He is angry and mean.)

- The investigator digs up evidence about the crime.
  (The investigator is looking for evidence. He is being compared to a dog who digs up bones.)

Simile vs. Metaphor: Look at the examples below. What does each one mean?

Simile	Metaphor
1. Sam eats like a pig. 2. San's house is a pigsty.	1. Sam is a pig.

Metaphors and Similes make your stories more interesting. Look at the examples below.

Example 1: This city is beautiful. (okay, but boring!)
(What are some things that are "beautiful"?)
♦ This city is **paradise**.
♦ This city is **like a garden of beauty**.
♦ This city is **a colorful painting**.

Example 2: My father is very smart. (okay, but boring!)
(How can you describe him as "smart"?)
♦ My father is **like a wise old wizard**.
♦ My father is **a walking encyclopedia**.
♦ My father is **a human university**.

Practice 3: Think of AT LEAST three ways to say the following sentences using similes or metaphors.

1. My house is a nice place where I can relax.
2. English is a difficult language to learn.
3. Ecuador is very different from the U.S.
4. It's very hot today.

Practice 4: Now think about one of your family member's. How would you describe them? Write three similes or metaphors about the family member. Then add some more details and describe family member for your partner.

1._____

2. _____

3. _____

Practice 5: Watch videos of native speakers and answer the questions below:

1. How does the speaker make their story interesting?
2. Does the story have a beginning, middle, and an end? How can you tell?
3. What does the speaker do with their hands? How does this help you understand the story?

Practice 6: Now think of a story about your family member. Think about what happened in the beginning, the middle, and the end of the story. Think about how you will make your story more interesting by

including lots of details and descriptions using your metaphors and similes! Then, tell your story to AT LEAST two other classmates.

Speaking Lesson 2

Warm-up Discussion Cards

1. Watching TV . . . a. boring b. entertaining c. a waste of time d. . . .	2. Learning English . . . a. easy b. difficult c. important for my future d . . .
3. Riding a bicycle . . . a. healthy b. hard work c. good for the environment d. . . .	4. Traveling abroad . . . a. exciting b. frustrating c. expensive d . . .
5. Living alone . . . a. easy b. boring c. lonely d. . . .	6. Playing computer games . . . a. a lot of fun b. boring c. addictive d. . . .
7. Watching movies in the movie theater . . . a. entertaining b. a waste of money c. relaxing d. . . .	8. Shopping . . . a. fun b. boring c. a waste of money d. . . .
9. Saving money . . . a. hard b. easy c. pointless d. . . .	10. Exercising regularly . . . a. hard to do b. beneficial c. time-consuming d. . . .
11. Doing homework . . . a. helpful for my studies b. a waste of time c. important d. . . .	12. Cooking . . . a. easy b. fun c. only for women d. . . .
13. Getting up early . . . a. terrible b. a good habit c. necessary for studying at the AECP d. . . .	14. Doing household chores . . . a. easy b. annoying c. time-consuming d. . . .

Agreeing, Disagreeing, and Giving Your Opinion

https://www.usingenglish.com/files/pdf/strong-weak-opinions.pdf

Directions: For the groups of phrases below, decide if they're used to Agree (A), Disagree (D) or Give Your Opinion (G).

You could say that.
You could be right.
You may be right.
You might be right.

I really think that…
I strongly believe that…
I'd definitely say that…
I'm (absolutely) certain that…

I'm positive that…
In my honest opinion,…
To be (perfectly) frank,…

I can't agree.
I really don't agree.
Are you joking?/ Are you kidding?
There's no way I can accept that.

I feel more or less the same way.
I guess you're right.
I might be able to accept that.

I couldn't agree with you more.
That's exactly the **point I was trying to make**.
I feel exactly the same way.
I totally agree.

I don't really agree.
I don't think I agree.
I **see your point**, but . . .

I suppose you're right.
That seems to make sense.
I partially agree.
I partly agree.

In my humble opinion,…
I'd guess that…
I'm no expert (on this), but…

In my limited experience,…

This is just my opinion, but…
I'm not sure, but I think…
This is just my **two cents' worth**, but

To the best of my knowledge,…
As far as I know,…
I'd probably say that…
On the one hand I think . . . but on **the other hand** . . .

You **took the words right out of my mouth**.
That's exactly what I was going to say.
You're absolutely right.
That makes complete sense.

Discuss:
1. Which phrases are for when you strongly agree?
2. Which phrases are for when you strongly disagree?
3. Which phrases seem more polite?

Other Useful Phrases:

- What's your **point**?
- I don't **get** what you're trying to say.
- I'm not **following** you.
- There's **two sides** to every coin.
- Think of it from **my point of view**.

Mini Debate Topics

1. Who should be more responsible for addressing a country's environmental issues: the government or individual citizens?
2. Which is more true: human activity improves the conditions of living on Earth and makes it a better place to live or humans destroy our planet and lead it into decline?
3. Which is more important: protecting the environment or economic development? Why?
4. Do you think animal testing should be banned? Why or why not?
5. Do you think corporations are responsible for protecting the environment? Why or why not?
6. Which country in the world do you think is the most environmentally friendly? The least environmentally friendly? Why?
7. Is ecotourism really good for the environment and local community? Why or why not?

Speaking Lesson 3

Speaking Lesson: Describing Graphs and Charts

Adapted from: https://www.ielts-exam.net/preparing/Writing_task_one_single_line_graph/208/

Part 1: Vocabulary – Look at the words below. Can you put them in the right category in the chart below? Which words show more rapid change, and which words show slower change?

Fall	Slump	Rise
Climb	Increase	Take Off
Plunge	Drop	Boom
Soar	Decrease	Accelerate
Fluctuate	Dip	Plunge
Be Unstable	Surge	Decline
Peak	Flatten Out	Crash
Plateau	Plummet	Dive
Level Off	Bottom Out	
Jump	Rebound	
	Bounce Back	

Go Up	Go Down	Go Up and Down	Straight Line: Not Up or Down

Speed of Change

Rapid - Rapidly
Slow - Slowly
Sudden - Suddenly
Sharp - Sharply
Steady - Steadily
Gradual - Gradually
Fast - Quickly

Size of Change

Noticeable - Noticeably
Substantial - Substantially
Considerable - Considerably
Slight - Slightly
Significant - Significantly
Dramatic - Dramatically
Negligible - Negligibly

Part 2: Think of two things that have changed with time. Draw two graphs on your paper, but don't show anyone. Describe the first graph for your partner, who will draw the graph on their paper. Can your partner guess the topic of the graph? Then describe your second graph for a different partner.

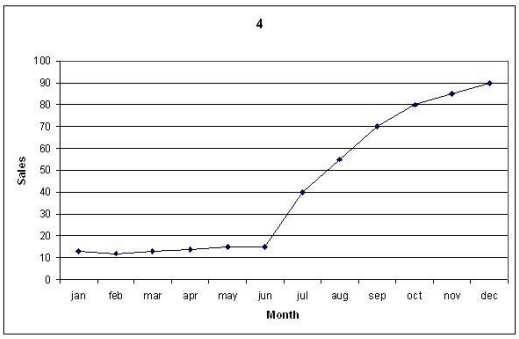
Example:

My Graph:

My Partner's Graph:

Part 3: Information Gap, Student A

A



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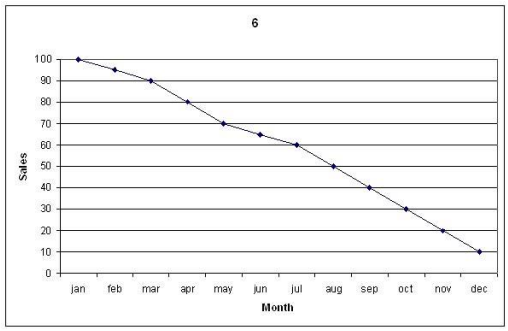

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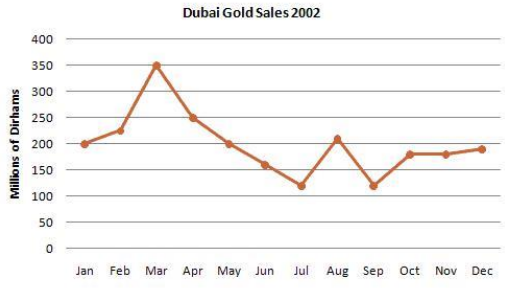

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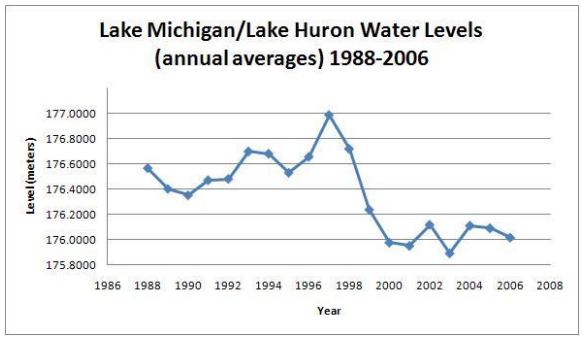
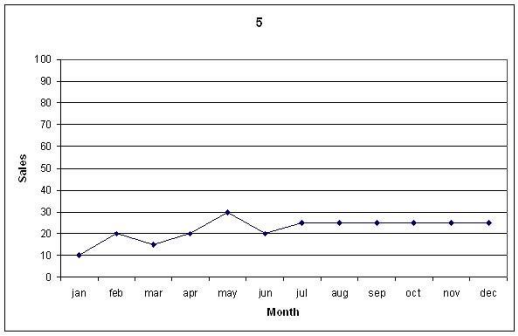
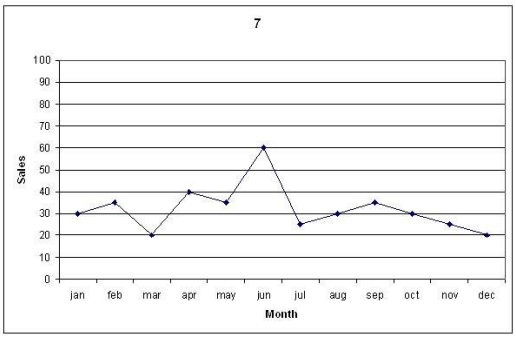
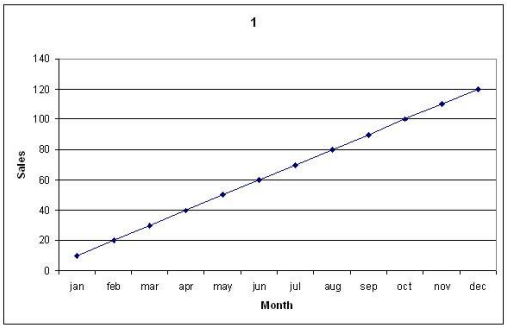
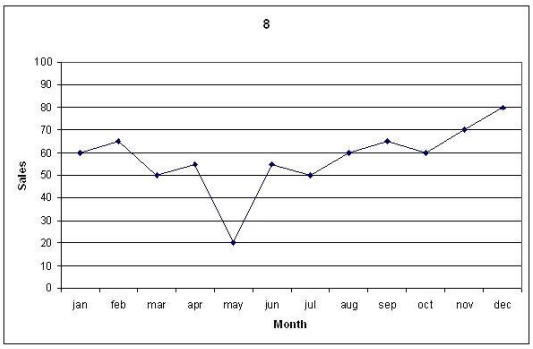


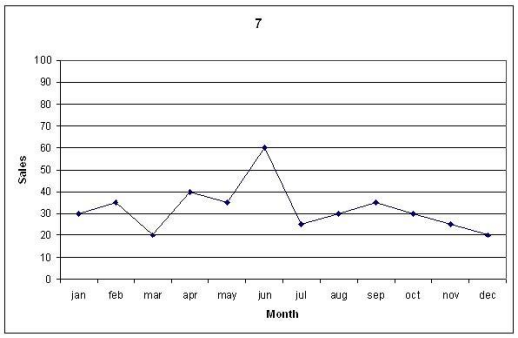
F 

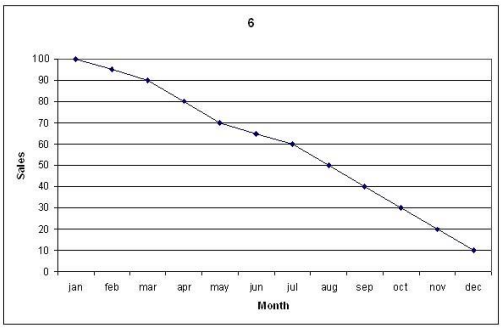
G 

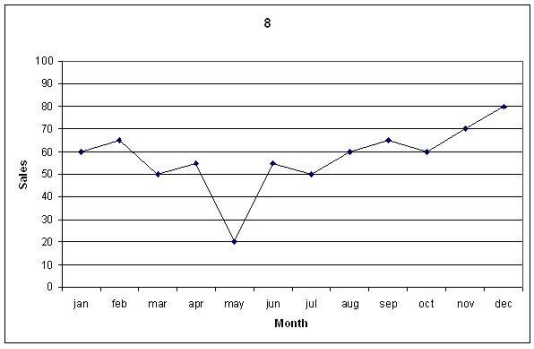
D 

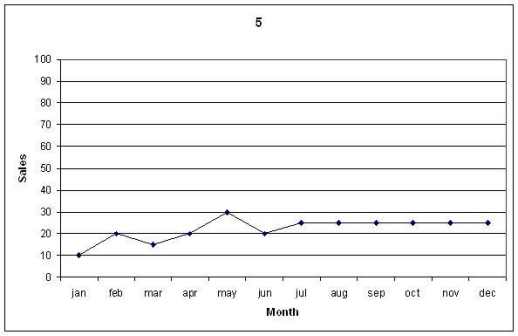
H 

Part 3: Information Gap, Student B

1 

5 

2 

6 

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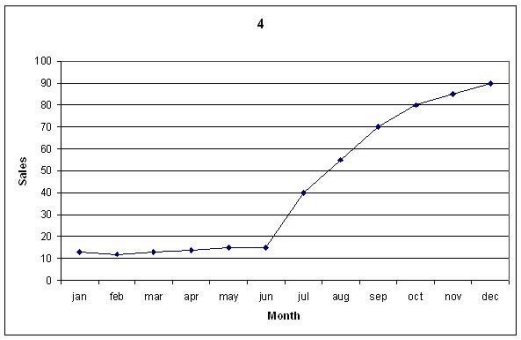

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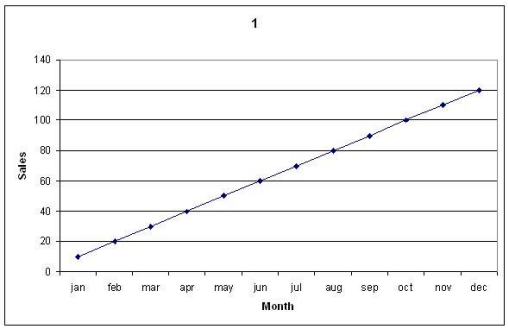

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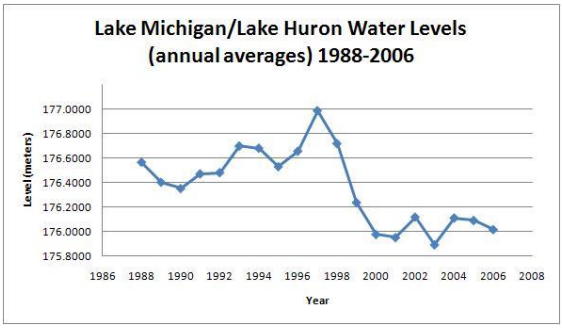

Part 4: Environment Graphs and Charts