Teacher gesture in a post-secondary English as a second language classroom: A sociocultural approach

Natalie Hudson
University of Nevada, Las Vegas

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TEACHER GESTURE IN A POST-SECONDARY ENGLISH AS A SECOND LANGUAGE CLASSROOM: A SOCIOCULTURAL APPROACH

by

Natalie Hudson

Bachelor of Arts
University of California Berkeley
1995

Master of Arts
University of Nevada Las Vegas
2002

A dissertation submitted in partial fulfillment of the requirements for the

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College of Education

Graduate College
University of Nevada Las Vegas
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We recommend the dissertation prepared under our supervision by

Natalie Hudson

entitled

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Doctor of Philosophy in Curriculum and Instruction

Steven G. McCafferty, Committee Chair

Thomas W. Bean, Committee Member

Shaoan Zhang, Committee Member

LeAnn G. Putney, Graduate Faculty Representative

Ronald Smith, Ph.D., Vice President for Research and Graduate Studies and Dean of the Graduate College

May 2011
ABSTRACT

Teacher Gesture in a Post-Secondary English as a Second Language Classroom: A Sociocultural Approach

by

Natalie Hudson

Dr. Steven G. McCafferty
Professor of Curriculum and Instruction
University of Nevada Las Vegas

Vygotsky (1978) uses the example of gesture in a child, stating that finger pointing represents an interpersonal relationship, and only after this cultural form is internalized can an intrapersonal relationship develop. Language learning must be viewed in the context of social interaction, and the gesture of others, specifically language instructors toward their students, is a form of social interaction worthy of attention. Newman and Holzman (1993) discuss the idea of performance as a mode of semiotic mediation related to meaning making. Daniels, Cole, and Wertsch (2007) also discuss the concept of performance, stating that gestures are tools which assist performance. Wells (1999) adds performance to Vygotsky’s modes of semiotic mediation when discussing learning and teaching within the ZPD, considering these sources of assistance to learners in the ZPD.

This study examined the discourse and corresponding gestures used in the classroom by one female instructor and her students in a university ESL pronunciation course. Specifically, the observations are of the teacher in interaction with students concerning the subject matter. The instructor and students were video recorded for the first five weeks of an eight-week course, meeting twice per week for one hour. The findings are discussed in relation to the instructor’s embodied practices. The data revealed that the
instructor gestured and mimetically illustrated in order to concretize the language. In
addition, her performance included nearly constant instantiations of language in terms of
gesture. The gestures observed are organized into the different linguistic categories of
grammar, pronunciation, and lexis. In addition, gestures related to classroom
management are described. This organization reinforces the notion that the instructor was
trying to concretize the language and codify it. Gestures in this study are considered in
relation to pedagogy. Therefore, not only the gesture types, but also the functions, are
discussed.
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DEDICATION

This dissertation is dedicated to Aidan and Finn Hudson. I love you more than life itself. Thank you for accompanying me on this journey. This is entirely for you.
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CHAPTER 1
INTRODUCTION

Overview

Learning a second language requires an integrated synthesis of many different elements; vocabulary, grammar, and idioms are a few of the common components that a person must learn in order to successfully communicate in another language. Some other forms of communication that must be considered are paralanguage, facial expression, proxemics, and rhythm. Wylie (1985) states, “We communicate with every means at our disposal, so the whole body, not just the parts that produce speech, must be trained to communicate in a foreign culture” (p. 778). Wylie calls for the necessity of all forms of communication to be considered, not just spoken language. One integral component of language learning that is often neglected is gesture.

Topic

The topic of gesture and nonverbal behavior is one that is only recently being considered in relation to second language learning. In 1967, Freedman and Hoffman complained of the “dearth of systematic investigation of kinetic behavior occurring in clinical or psychotherapeutic interviews” (p. 527). It is a complaint that has been valid for second language acquisition research as well. In a microanalytic inquiry of one ESL teacher’s nonverbal behavior, Lazaraton (2004) also begins by expressing the lack of literature on gesture in second language acquisition, indicating that gesture is merely considered in relation to strategic competence and animal behavior only. One possible reason for the focus on verbal features of language may be the practicality, or lack thereof, of videotaping. Another reason that gesture has been neglected for so long is due
to the historical nature of looking at language and learning. Regardless of the reasons, the field of second language acquisition is currently benefiting from an inquisition of a topic that has been neglected for too long.

**Research Questions**

The current study aims to help answer some questions about the topic of gesture in relation to second language acquisition. Specifically, the following research questions are those considered in this study from a sociocultural theoretical perspective.

1. What patterns of gesture use does a post-secondary ESL instructor exhibit in the classroom to mediate learning?
2. How aware is this ESL instructor of the gestures she uses in the classroom? For example, does the instructor intentionally manipulate gestures in a specific way in the classroom? Does the instructor explicitly teach specific gestures? How does the instructor believe gesture mediates L2 learning?
3. How aware are students of the gesture use of their instructor? How do students feel about their instructor’s gesture use? Additionally, how aware are students of their own gesture use?

**Purpose**

A question often asked of English as a second language instructors is whether they speak a lot of languages. Instructors often explain that while they do have some knowledge of other languages, they only teach in English because the students in their classes speak many different native languages. The person with whom they are speaking is often dumbfounded, asking how it is possible to teach students English without speaking their language. The general response from instructors is that they use other
means at their disposal such as pictures, realia, body language, and gestures. With regard to gestures, language instructors would have difficulty teaching without them, and the purpose of this research is to examine the role of gesture as it pertains to second language teaching in the classroom.

**Limitations**

In Gumperz and Hymes (1972) seminal volume on directions in sociolinguistics, the authors related the then current views on the ethnography of communication. The introduction to the volume clearly shows that gesture was not a consideration in the study of sociolinguistics at the time. The emphasis is entirely on the study of linguistic forms. The authors briefly cite Garfinkel (1967) and others such as Goffman and Cicourel who adhere to interactionist social theory, stating that “…interactionists deny the parallel between social and physical measurement” (p. 15). Essentially, the authors do not promote gesture as integral to the study of sociolinguistics. The authors never explicitly mention the term *gesture*, but the implication is that physical movement can be inferred from the language choice of the interlocutor because he or she chooses particular language based on the situation. Gesture is viewed merely as a contextualization. However, in a more recent work by Gumperz and Levinson (1996), gesture is discussed more in terms of having meaning in and of itself, thus adding to the understanding of the spoken word.

**Biases**

As noted above, gesture is a component of language that has, until recently, been ignored in relation to language learning. It is a subject of study that is now gaining momentum. As opposed to being against the study of gesture, many linguists simply
ignore the issue and choose to study the verbal component of language learning. Opposition to the study of gesture from the linguistic side is nonexistent; most linguists simply do not embrace the idea as of yet and consider the study of gesture as “extra linguistic.” As McNeill argues, however, gesture is really a part of language and not “extra” at all.

**Statement of the Problem**

For instructors who teach English as a second language, attention is not always given to gesture use in the classroom. Lazaraton (2004) states, “gestures and other nonverbal behavior are forms of input to classroom second language learners that must be considered a salient factor in classroom-based second language acquisition research” (p. 79). The purpose of this research is to make visible the patterns and practices of a group, students and their teacher, acting as a culture. The impetus for this research is that they seem to benefit from the use of gesture. This qualitative research can provide a deeper understanding of gesture use with ESL students and determine what they themselves view as the most beneficial.

**Potential Significance**

If teachers are aware of how gesture use can specifically benefit their students, they will be better at helping their students to attain their English language education (McCafferty & Stam, 2008). After considering this research, teachers may have a better ability to determine how gesture use affects language learning in the classroom. They may better understand the role that gesture has in the pursuit of helping students with their goal of second language acquisition. When teachers contemplate how they should use gesture, they have valuable information that can be applied in the classroom.
Organization

This introductory chapter begins with an explanation of the initial literature review methodology. Then the chapter is organized chronologically according to the development of gesture as a subject of study, beginning with a brief discussion of the history of gesture up to the early twentieth century, including prominent figures who have shaped the study of the topic. Included are reasons for the decline of gesture studies at the beginning of the twentieth century and their subsequent resurrection during the latter half of the century. This is followed by definitions of specific gesture terms and the various gesture classification systems that have been devised. The theoretical perspective used to frame the study is then provided.

Chapter 2 includes a brief discussion of prominent theories of how gesture and speech interrelate. This is followed by the importance of gesture in semiotic development; the concentration is on gesture in children, gesture in the blind, and gesture with regard to culture. What has been found regarding the brain in connection to speech and gesture production follows. The remaining part of the second chapter is devoted to the examination of studies considering the nature of gestures in the first language, gesture in relation to learning and teaching, and gesture and second language, including gesture as part of the second language classroom.

Literature Review Methodology

To begin, the literature reviewed examines some of the existing research on gesture in general. All aspects of gesture are described, culminating in the description of classroom-based gesture research related to second language teaching and learning, of which very little exists. The review of the research was not limited only to those students learning
English as a second language. Studies that examined students learning other languages and other subjects are included. The focus of the study was intended to be adult learners, but adolescent learners are also considered. The literature reviewed also considers the gesture development of children because the learning and use of gestures in children is the foundation for the gestures used in relation to second language learning. The research considered in relation to gesture in general is by no means inclusive; however, for the research that has been conducted on gesture and classroom-based research in relation to second language learning, the intention of this review is that it is comprehensive.

In order to create the literature review, a collection of literature related to gesture in language learning was gathered. Research began with computer searches beginning at the EBSCOhost Web database and searching in Educational Resources Information Center (ERIC), Academic Search Premier, and Professional Development Collection. Searches were also conducted using the Education Full Text database. Original search terms were *nonverbal communication, English, second language learning*, and *second language instruction*. The only limiter set in the search was that all articles be scholarly (peer-reviewed) journal articles.

This initial search yielded twenty-two articles, of which three were relevant to gesture in relation to second language learning. In addition, bibliographies of the three research articles found in these databases were used to find other studies related to the topic of gesture in general and in relation to language learning. In light of the little research in the area of classroom-based research, the review was expanded to simply include articles done on gesture. Finally, three fundamental texts in the field of gesture (Kendon, 2004;
McNeill, 1992; Goldin-Meadow, 2003) were used to gather information on gesture studies.

The literature was then read and reviewed, and a summary of the literature follows. Conclusions are drawn and suggestions for further research are given. This review can be specifically used as a reference for English as a second language instructors teaching in post-secondary institutions. However, teachers of any foreign language or other subject, who are teaching at any institution, can benefit from this review.

An abundant amount of literature exists on the topic of gesture. The following section is an attempt to provide a brief survey of some of the existing literature on gesture as it relates to communication in general. This is the specific focus since the topic of research is gesture as a part of language and communication.

**A Brief History of the Study of Gesture**

This following is a brief summary of Kendon’s (2004) history of the study of gesture from classical antiquity to the early twentieth century. To begin, Aristotle believed that in an oratory, a speaker should focus arguments on the logic and strength of the argument without using facial expressions and gestures to convey meaning or persuade listeners. In Rome, however, figures such as Cicero believed gesture and expression were valuable in oratorical discourse (Kendon, 2004).

Kendon (2004) describes the Spaniard Quintilian’s work in Roman Antiquity in about 100AD. The book *Instituto Oratorio* is the most complete resource on gesture from the Roman era. Quintilian describes gestures as movements of not only the hands and arms, but also the head, eyes, eyebrows, nostrils, neck, and body. The discussion of the hands, however, is the lengthiest and most detailed. Quintilian’s view was that gesture should
not replace speech. Rather, movements should only add emphasis to what is being stated (see also Goldin-Meadow & McNeill, 1999).

The text did not become a major influence in the field until the end of the sixteenth century. This is when a revived interest in gesture came about for many reasons. Among them was the fact that encounters with the native people of the New World showed that gesture was an integral part of communication that was, at least in part, universal (Kendon, 2004).

In the early seventeenth century, in the year 1616, Bonifacio published *L'Arte de Cenni* (the Art of Signs), which is one of the earliest books published in Europe that is devoted entirely to gesture. The first part of the book is an attempt to chronicle all of the signs that can be made with the body. The second part of the book describes the gestures used in specific professions. Bonifacio believed that body movements indicated a person’s true feelings more accurately than words. Furthermore, the author writes that a person may affect the impression made on other people through bodily actions. Finally, an important part of the text, which was a novel approach to the idea of gesture at the time, was that gesture, at least in part, could be used as a universal language to compensate for differences in spoken languages (Kendon, 2004; see also Donald, 2001; McCafferty, 2008b for discussion of this topic).

The *Chirologia: or the Naturall Language of the Hand* of 1644 and the *Chironomia: or the Art of Manual Rhetoricke*, two volumes by Bulwer, a London physician, are the first two known texts on gesture to be published in English. Bulwer also published three other texts on communication with the body. One discussed the teaching of the deaf and included a description of a finger-spelling alphabet; this was possibly the invention of
such an alphabet. Another text focused on facial expression, and finally, another on not changing the body for cultural reasons. *Chirologia* and *Chironomia* provide detailed descriptions of gestures with illustrations (Kendon, 2004). Bulwer viewed gesture as “a kind of symptom of the state of the soul” (Kendon, 2004, p. 28).

**Gesture in Art**

Several artists, including Leonardo Da Vinci, wrote treatises on the appropriate study and painting of the body and movements. In addition, stage actors were influenced by these painters. In the eighteenth century, a vocabulary of gestures was devised that was known throughout Europe. Eventually, these gestures were used across Europe by orators, priests, lawyers, and the general educated public despite which language a person spoke (Kendon, 2004). Austin (1802), who wrote another *Chironomia*, provides the “one of the clearest and most systematic treatises on gesture” (Kendon, 2004, p. 34).

**Sign Language**

Finally, at the turn of the century, two Frenchmen worked extensively with the deaf, creating a more complex sign language than the one already in use by the deaf in France. They were de l’Epée and Sicard (Kendon, 2004).

In this time period, works on gesture primarily focused on gesture as an autonomous medium of expression, as part of the origins of language, and on gesture in relation to thought. This is in contrast to the current focus of gesture studies that is on gesture in relation to speech although all of these topics continue to be studied (Kendon, 2004).

**Nineteenth Century Contributors**

Four contributors to the study of gesture in the nineteenth century were Andrea De Jorio, Edward Tylor, Garrick Mallery, and Wilhelm Wundt. Each is considered below.
Andrea De Jorio. De Jorio’s *La Mimica degli Antichi Investigata nel Gestire Napoli* (Gestural Expression of the Ancients in the Light of Neapolitan Gesturing), published in 1832, is regarded as a classic in the field of gesture. It is a treatise on Neapolitan gesture and the first known ethnography to describe the use of gesture in a particular community. In this anthropological work, De Jorio studied the role of gesture in the everyday actions of the people of Naples. De Jorio was a well-published scholar who was ahead of his time with regard to this type of study. De Jorio recognized the subtle differences between similar gestures and different meanings for the same gestures depending on the situation. De Jorio also recognized that speakers of Italian in other parts of Italy used a different repertoire of gestures (Kendon, 2004).

Edward Tylor. Tylor (1865), considered to be one of the founders of what would later become cultural anthropology, was interested in determining whether cultural similarities were the result of diffusion or parallel invention. The conclusion was that they were the result of parallel invention. The discussion of expression of thought raised by Tylor includes the use of not only speech, but also gesture, pictures, and written words (Kendon, 2004).

Tylor also examines sign language used by the deaf, North American Indians, and Cistercian monks. Interestingly, Tylor points out that although sign languages may be different overall, the basic signs are similar enough that deaf persons have been able to communicate with ‘savages’ from other countries without any problem at all. In this sense, gesture/language is universal (see also Donald, 2001; McCafferty, 2008b). Tylor also indicates that the derivation of signs is based on etymologies of words; for example, the sign for a bird is that which flies, and the sign for a plant is that which sprouts. Thus,
in Tylor’s view, the formation of language, whether signed or linguistic, is based upon the same foundation (Kendon, 2004).

A final point made by Tylor is that similarities exist between picture writing and gesture language. For instance, the evolution of Chinese writing into characters and hieroglyphics into the alphabet show that the formulation of linguistic forms is inherently connected. Thus, Tylor was instrumental in proving that gesture is related to both language and thought (Kendon, 2004).

**Garrick Mallery.** Mallery’s contribution to the field of gesture was the study of gesture in relation to the sign languages used by the Plains Indians of North America. Mallery was a colonel in the United States Army who was involved in campaigns against the Plains Indians and eventually became in charge of gathering information on them for the United States Bureau of Ethnology. Mallery gathered information on the Indians’ sign language and picture writing. Kendon (2004) cites Mallery’s 1881 text *Sign Language among North American Indians Compared with that among Other Peoples and Deaf Mutes* as “one of the most thorough and comprehensive books on gesture ever written” (p. 54). Mallery argues that mental thought precedes gesture, and gesture may not have necessarily preceded speech, but it was probably more important. According to Mallery, gesture and speech are intimately connected (Kendon, 2004).

**Wilhelm Wundt.** Wundt [1900] 1973, regarded as the founder of experimental psychology, was a prolific researcher. Language and, specifically, gesture were a small part of the body of work produced by Wundt. Wundt considered gesture in relation to the emergence of spoken language and believed that gestures were derived from a person’s expressive movements, which were a result of psychological thought processes. Since
gesture is subject to developmental processes, Wundt believed gesture revealed mental processes (Kendon, 2004).

These four contributors added greatly to the body of work on gesture in the nineteenth century before the interest in gesture declined at the beginning of the twentieth century.

**The Decline of Gesture Studies**

Kendon (2004) explains how the interest in gesture declined at the beginning of the twentieth century and then expanded in the latter half of the 1900s. One reason for the decline at the turn of the century was that behaviorism and psychoanalysis, which focused on behavior not subject to conscious control, had emerged. Also, Bloomfield (1933) argued that linguistics should be a field of study not dependent on the field of psychology, and it is Bloomfield that considered gesture as insignificant. This, unfortunately, influenced other researchers of the time. Fortunately, other linguists, such as Bolinger (1946), Pike (1967), Harris (1951), Trager (1958), McQuown (1957), and Birdwhistell (1952, 1970), asserted that linguists should not merely study speech without considering visible bodily motion (see also Harris, 1996).

Chomsky (1967) is of importance to mention here because, due to emphasis on inner mental apparatus, linguists did not focus on gesture. Chomsky’s work “had the consequence of changing the primary enterprise of linguistics away from describing languages towards that of describing the mental apparatus that enables language” (Kendon, 2004, p. 83). Nor did gesture have a place in the study of nonverbal communication, which was the study of “those aspects of behaviour that contributed to the maintenance or change of interactions or relationships, or which were thought to reveal attitudes and characteristics of persons that are not revealed through a study of
what is spoken” (Kendon, 2004, p. 72). Thus, during the first half of the century, gesture was not highly focused upon as a topic of study; however, the subject was about to undergo a resurrection of interest (Kendon, 2004).

**The Return of Gesture Studies**

According to Kendon (2004), gesture studies returned in the latter half of the 1900s for three reasons: interest in the origin of language, interest in sign languages, and interest in the relationship between language and thought. Psychologists and linguists were those in particular who became interested in language in relation to thought. One important article was by Hewes (1973) who argued that the first language must have been gestural.

**The Definition of Gesture**

Kendon (2004) describes how visible actions are recognized as gesture, beginning with a lengthy discussion of what can, and what cannot, be classified as gesture. Kendon (2004) defines *gesture* as “a name for visible action when it is used as an utterance or as a part of an utterance,” while an *utterance* is “any ensemble of actions that counts for others as an attempt by the actor to ‘give’ information of some sort” (p. 7). This giving of information does not have to be verbal; however, it must be intentional. While persons may, on occasion, give off clues as to their feelings or thoughts, for an action to be classified as a gesture, it must be intentional. Laughing, smiling, and crying, are not gestures unless they are not genuine; only when a speaker produces these actions while pretending are they considered gestures. The touching of hair, jewelry, and clothing are not gesture. The amount of space a person creates with a listener is not a gesture as this is setting up an interaction as opposed to conveying meaning. Practical actions, such as
eating, smoking, or drinking are not gestures. In sum, gestures are deliberate, conscious movements that have a communicative intent (Kendon, 2004).

*Speech* is “the vocal activity engaged in when a spoken language is employed” (Kendon, 2004, p. 110). A person who produces an utterance is a *speaker*, and the person or persons who are listeners or addressees are referred to as *recipients* or *interlocutors*.

Another important component of this discussion of gesture definitions is Kendon’s continuum, related by McNeill (1992, p. 37):

\[
gesticulations \rightarrow \text{language-like gestures} \rightarrow \text{pantomimes} \rightarrow \text{emblems} \rightarrow \text{sign languages}
\]

Moving from left to right on the continuum, the presence of speech declines, the presence of language properties increases, and idiosyncratic gestures are replaced by socially regulated signs (McNeill, 1992). The components of this continuum are defined below.

*Gesticulations* are the gestures that accompany speech in the rendering of a thought (McNeill, 1992). They are idiosyncratic and spontaneous. A gesture almost always occurs in the presence of speech. *Language-like gestures* are gestures that take the place of words in speech. With *pantomimes*, speech is optional, and the hands and arms illustrate objects or actions. *Emblems* are “mostly insults but some of them praise, and virtually all attempts to control other people’s behavior” (McNeill, 1992, p. 38). Distinct rules exist in any culture for how a specific emblem must be formed. It is important to note that emblems differ according to culture. *Emblems*, as defined by Ekman and Friesen (1969) are “nonverbal acts which have a direct verbal translation” (p. 63). These translations are, of course, culturally determined and may vary across cultures. One example of an *emblem* would be a fist with the thumb extended upward, indicating, in North America, that something is “good,” or if one is diving, that it is time to go “up.” McNeill gives the
example of the ok sign. In addition, all obscene gestures would be classified as emblems.

Finally, sign languages are “full-fledged linguistic systems with segmentation, compositionality, a lexicon, a syntax, distinctiveness, arbitrariness, standards of well-formedness, and a community of users” (McNeill, 1992, p. 38). For example, American Sign Language (ASL) is a language, and gestures accompany ASL discourse (Goldin-Meadow, 2003).

**Classification and Terminology**

Although many systems exist for classifying gestures, no transcription system or terminology is universally adopted. However, that of McNeill (1992) is prevalent in the literature. Despite the fact that the terminology used varies, a general agreement does exist on the basic categories of gesture movements, and these categories should be used as a guide to studying gesture. However, they should not be considered rigid classifications when analyzing a person’s movements because speakers may simultaneously perform one type of gesture while performing another.

Some of the classification systems that Kendon (2004) describes are those devised by Quintilian (1992) who discusses movement of the entire body, from the head down to the feet; Angenot (1973) discusses this work. Another classification system is that described by Bary (1679), who describes twenty fundamental emotions as indicated by the body and hands and arms. Engel (1785) also considered movements that incorporated the entire body. Austin (1802) focused more on the hands and arms. Wundt (1973) did not consider gesture in relation to speech (Kendon, 2004).

In the twentieth century, the classification systems of Efron (1941), Ekman and Friesen (1969), and McNeill (1992) prevail, with that of McNeill being the most
prevalent. Ekman and Friesen consider bodily expression, while Efron and McNeill focus on the hands and arms (Kendon, 2004).

It is important to note that gestures are difficult to classify into discrete categories because they often do not appear discretely. It is very common for gestures to ‘overlap’ or be classifiable into more than one category which causes classification to be difficult at best.

In any discussion on the topic of gesture and nonverbal behavior, the terminology commonly used by those who are knowledgeable in the field is that of McNeill (1992). These terms for gestures, which are movements of the hands and arms used in conversation, are prevalent in the literature. McNeill outlined four major terms which are commonly referred to in current empirical research: *iconics, metaphorics, deictics, and beats*. The terms outlined are meant to identify the types of gesture that occur in narratives.

**Iconics.** McNeill (1992) defined *iconics* as gestures that refer “to a concrete event, object, or action that is also referred to in speech at the same time” (p. 77). Iconics are related to the semantic content of speech and can be defined as either kinetographic (representing an action) or pictographic (representing an object) (Birdwhistell, 1952, 1970). An example of a kinetographic iconic gesture would be gesturing to represent skiing, and an example of a pictographic iconic gesture would be using the hands to demonstrate the shape of a triangle.

**Metaphorics.** *Metaphorics* are similar to iconics; however, they represent abstract ideas as opposed to actions or concrete objects. According to McNeill (1992), metaphorics are “like iconic gestures in that they are pictorial, but the pictorial content
presents an abstract idea rather than a concrete object or event” (p. 14). Metaphors may also be classified as kinetographic or pictographic.

McNeill (1992) discusses the types of metaphoric gestures in narrative. This includes the presentation of the idea of the conduit metaphor, explaining that abstract concepts such as language, knowledge, and art are presented as bounded containers. In these abstract gestures, the meaning is presented as having substance, the substance is inside a container, and the container can be passed to a recipient via a conduit.

The conduit metaphor has been recorded as part of Western culture since at least the sixth century B.C. In some languages, however, conduit metaphors are absent. For example, in English, German, Italian, and Georgian, abstract meanings can be expressed as bounded. However, in non-Western cultures such as China or northwestern Kenya (where Turkana is spoken), abstract meaning is boundless; the gesture is of a substance without form that is not manipulated (McNeill, 1992).

One example of differing gestures according to culture is that in the United States gestures radiate away from the head for gestures depicting mental states. Interestingly, however, Japanese speakers use gestures that extend out from the stomach, indicating the idea that Japanese consider the “gut” a center for feelings, thoughts, and mental states (McNeill, 1992).

An important point is that language does not have direct control over thought, but the gesture scheme of a language does influence thought by providing the foundation for creating metaphoric images.

**Deictics.** Deictics are movements that include pointing. A person may be pointing to a concrete object, or the reference may be to an abstract idea. For example, a finger
pointing can refer to a person or to the idea of moving “up” in a hierarchy such as the hierarchy that exists in the workplace. According to McNeill (1992), “Pointing has the obvious function of indicating objects and events in the concrete world, but it also plays a part even where there is nothing objectively present to point at” (p. 18). Another point about deictics is that most pointing gestures in narratives and conversations are in reference to something abstract. Finally, in a narrative, the first mention of a character or episode results in pointing or beats. For a secondary mention, however, these are only produced at a rate of 40%. Furthermore, when speakers are engaged in a conversation, the introduction of a potential conversation topic is accompanied by pointing.

**Beats.** Beats are gestures that indicate rhythm and emphasis. They correspond to the term baton used in other classification systems (Efron, 1941; Ekman & Friesen, 1969). McNeill (1992) states, “Unlike iconics and metaphorics, beats tend to have the same form regardless of content” (p. 15). In other words, beats are not generally linked to the semantic content of speech. Beats are distinguished from other types of gesture in that beats have only two phases of movement-in/out, up/down, etc. McNeill (1992) states, “Politicians, in fact, are great demonstrators of cohesive beats. Political speeches are accompanied by an incessant beat presence” (p. 16).

The movement of beats is short and quick, and the space may be very small. Beats appear insignificant, but they strongly indicate importance. In relation to distance, beats may signal an increase in distance from the speaker to the event being spoken about. For example, if a speaker departs away from the timeline of the story line to explain setting or character, this departure is often accompanied by beats. In other words,
when a speaker changes between narrative levels, beats may be used to signal that change.

**Other Terms.** While the above are the four major terms, another term that McNeill (1992) describes is a *Butterworth*, which is a gesture that arises in response to a speech failure. It is a gesture used when someone cannot find the word he or she needs, so the result is fingers grasping at the air, almost as if picking a fruit. Though not analyzed systematically in second language learning studies, this is an important gesture in that it relates the trouble that the speaker is having in trying to find a necessary word. A Butterworth corresponds to Freedman and Hoffman’s (1967) *speech failure*. Freedman and Hoffman also designed a system for classifying hand movements. It is important to note that Freedman and Hoffman’s terms were defined in relation to psychotherapy sessions, so some terms they defined are excluded from description here. Their system was based on the observations of two paranoid patients.

It is important to note that in the classificatory system of McNeill (1992), there are certain premises. They are:

1. Gestures occur during speech.
2. Speech and gesture are connected semantically and pragmatically, where the semantic meaning is direct and clear, and the pragmatic meaning must be inferred.
3. Gesture and speech develop simultaneously in children.

In addition to these terms, there are several others used in the literature to describe hand movements. These types of gestures are not used in conversation to negotiate meaning, so they are not systematically studied; however, they do deserve a place in any literature review on the topic of gesture. *Adaptors* are movements that a person makes
without necessarily being aware of them. For example, rubbing one’s face or playing
with one’s hair are not behaviors used exclusively during speaking and do not necessarily
play a part in transmitting the meaning of what is being said. Other terms for different
forms of nonverbal behavior include *haptics*, which is the use of touch to convey
meaning; *proxemics*, which is the use of physical space to convey meaning; and
*chronemics*, which is the use of time to convey meaning (Lazaraton, 2004). A final term
is *illustrators*, which is an umbrella term that includes “batons, spatial movements,
kinetographs, pictographs, deictic movements, and ideographs” (Cohen & Harrison,
1973).

For the sake of completeness, the following table (Table 1) incorporates terms used
by different researchers in relation to gesture classification (Efron, 1941; Ekman &
are interchangeable. The following table summarizes these four systems of gesture
classification.

Table 1

*Gesture Classification Systems* (adapted from McNeill, 1992, p. 76)

<table>
<thead>
<tr>
<th>McNeill</th>
<th>Efron</th>
<th>Freedman and Hoffman</th>
<th>Ekman and Friesen</th>
</tr>
</thead>
<tbody>
<tr>
<td>iconics</td>
<td>physiographics and kinetographics</td>
<td>literal-reproductive movements</td>
<td>kinetographs and pictographs</td>
</tr>
<tr>
<td>metaphors</td>
<td>ideographics</td>
<td>literal-concretization movements</td>
<td>ideographs underliners spatial</td>
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<tr>
<td>deictics</td>
<td>deictics</td>
<td>deictics</td>
<td>deictics</td>
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<tr>
<td>beats</td>
<td>batons</td>
<td>punctuating movements</td>
<td>batons rhythmics</td>
</tr>
<tr>
<td>Butterworths</td>
<td>speech failures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Some Characteristics of Gestures

McNeill (1992) describes gestures as global and synthetic, which means that the parts of a gesture combine to make a whole (global), and different segments of meaning are synthesized into a single gesture (synthetic). The parts combine to make a whole in relation to meaning.

Gestures are also noncombinatoric, which means that gestures do not combine to form larger, hierarchically structured gestures. An individual gesture depicts a specific idea unit. No hierarchy exists.

Additionally, gestures are context-sensitive. McNeill (1992) states, “Each gesture is created at the moment of speaking and highlights what is relevant, and the same entity can be referred to by gestures that have changed their form” (p. 41). Gestures depend on what is being spoken about at a specific moment.

Furthermore, gestures (gesticulations more so than emblems) are idiosyncratic, meaning no standards of form exist. Different people form gestures in different ways. Finally, according to McNeill (1992), gestures are timed to slightly anticipate and synchronize with speech.

The Three Phases of Gesture

A gesture unit is the entire movement a person’s hands or arms undertake, from a position of rest and back. McNeill (1992) and Kendon (2004) describe the three main phases of a gesture unit: preparation, stroke, and recovery. These phases are described below.

The first phase is called the preparation phase and is optional. In this phase, the speaker moves one or both hands from rest into a position in front of his or her body. The
preparation phase for the gesture generally anticipates speech, beginning “in advance of the parts of the spoken expressions to which it is to be linked semantically” (Kendon, 2004, p. 125). Thus, the preparation for a gesture stroke begins before the word is spoken. The second phase is the stroke, which is the main part of the gesture. In this phase, the speaker moves his or her hand backward from where it ended in the preparation phase. At the end of this phase, the hand is near the shoulder. This phase is essential to the gesture. The stroke phase coincides with speech. In relation to speech phonology, speech sounds and gestures are parallel. The stroke of a gesture, the most important component of a gesture, corresponds to the most prominent syllable in a clause. The final phase is recovery in which the hand returns to its resting position. Again, this phase is optional.

In addition to these phases, Kita (1993) describes a phase in which the final movement of the stroke is held. This phase is called the post-stroke hold. A person may also exhibit a pre-stroke hold. A gesture phrase is any preparation, the stroke, and any post-stroke hold. The stroke and any post-stroke hold are the nucleus of the gesture phrase. A gesture phrase does not include the recovery, but the recovery is part of the gesture unit. A gesture phrase may include several gesture phrases.

An additional term is G-unit, which is the time period that a speaker takes to complete a gesture. A G-unit begins when the arm starts to move and ends when the arm has returned to rest. For most speakers, gesture activity is fairly continuous; however, the number of rest periods is almost the same as the number of gestures.

A singleton is defined as a single gesture that is completed with the hands raising from the rest position, performing the gesture, and returning to rest. Most gestures are
performed one gesture at a time, as singletons. This characteristic of gestures, along with the accompaniment of speech, differentiates gestures from pantomime.

**Gesture Space**

McNeill (1992) illustrates the space that speakers use while gesturing, noting that speakers from different cultures have different gesture spaces. For English speakers, iconics occur in the center of the body, metaphors in the lower center, and deictics in the periphery. Beats vary according to speaker, but occur in the same area for each specific speaker. Beats, however, are not performed directly in the center of the body.

In terms of gestural space, the same physical area can be used to signify story characters, a television screen and the person watching it, or the narrator and a listener. Deictic gestures are used to signify occupants in these changes of space. Both beats and deictics can indicate changes in the narrative level of speech and changes of space in terms of who is being referred to (McNeill, 1992).

**Frequency of Gesture Types**

McNeill (1992) describes the frequency of gesture types in relation to narrative and extranarrative clauses. Narrative clauses are defined as clauses which describe a step in the development of the plotline of a story, while extranarrative clauses describe the setting or characters in a story. The frequency of gestures does not vary according to the type of clause. Specifically, the numbers of iconics and beats are approximately the same. However, iconics are present much more frequently with narrative clauses, while beats occur with both. Finally, abstract pointing occurs chiefly with narrative clauses, while metaphors appear chiefly with extranarrative clauses.
**Viewpoint**

McNeill (1992) describes the differing viewpoints that a gesture can have. If the gesture is a reenactment of the character, it is the character viewpoint (C-VPT). This viewpoint is used in transitive situations (when there is an object). If the gesture is a display of the viewpoint an observer, the gesture is said to be made from the observer viewpoint (O-VPT). This is often used with stative verbs (when an action has no object).

**Gestures and Discourse**

Gestures play a distinct role in the function of a discourse and relate meaning that the sentence cannot. Regarding English as a language, it is particularly weak in relation to other languages in that it lacks formal systems for marking the structure of discourse such as the use of particles. However, gestures can relate pragmatic content and so fulfill this communicative need (McNeill, 1992).

McNeill (1992) also discusses viewpoint in relation to discourse. In the character viewpoint (C-VPT), the speaker’s hand or body reenacts the movement of the character’s body. The voice of the speaker is the voice of the character. From the observer viewpoint (O-VPT), however, the gesture of the hand represents the entire character, and the voice of the speaker is the voice of a story narrator or an onlooker to the action. McNeill (1992) states, “With the character voice the space envelops the narrator—it is a space for the enactment of the character, and includes the locus of the speaker at its center. With an observer’s voice, in contrast, the narrative space is localized in front of the narrator…” (p. 190). The speaker can shift rapidly between these two viewpoints.
Distance

McNeill (1992) defines distance as the distance of the speaker to what he or she is speaking about. Three ways of using voice indicate the distance of the speaker to the topic: the character voice, the inside observer voice, and the outside observer voice. Of course, the least amount of distance is indicated with the character voice. The choice of voice indicates the importance of what is being discussed. Again, events that are more important have less distance, and in turn, more detail.

Theoretical Perspective

The following section examines the link between gesture and second language acquisition using sociocultural theory as a theoretical framework, specifically the ways in which gesture has been considered in the second language classroom. This section is meant to be a general introduction to this theory while Chapter 3 includes a discussion of sociocultural theory as it specifically relates to the current study and teaching and learning in the second language classroom. The specific aspects of the theory which are considered are cultural mediation, performance, activity theory, unit of analysis, genetics and development, the zone of proximal development, internalization, materialization, the relationship between thought and word, thought and language, regulation, and the contributions of Luria and Bakhtin.

A sociocultural theoretical perspective was used to examine the topic of gesture in relation to second language learning in the classroom. Sociocultural theory (SCT) is based on the ideas of Vygotsky (1978, 1987), Luria (1979, 1982), Leont’ev, Bakhtin, and others (see also Cole, 1996; Ratner, 2006; Wertsch, 1991; Lantolf, 2000; Newman & Holzman, 1993; van der Veer & Valsiner, 1991, 1994). The premise of sociocultural
theory is that the function of the mind is situated in the social, cultural, and historical contexts of activity. Three major themes of sociocultural theory are that human social and mental activity are mediated by tools and signs, genetics and development must be considered to truly understand mental functioning, and higher mental development is a result of social interaction.

**Cultural Mediation**

According to Vygotsky, transformations of consciousness are mediated by tools and signs which are used to mediate relationships with others. Essentially, humans have created tools such as language, mathematics, music, and art to mediate interaction in the world (Lantolf, 2000). These tools are altered throughout generations as a society deems necessary. In the current study, gestures are considered one of the tools involved in this mediation and in second language learning.

This use of signs and tools as the primary artifacts humans use to mediate actions is evidence of higher psychological functions (Vygotsky, 1978). Signs and tools are similar in that they both allow for the mediation of action (Figure 1).

![Diagram of Mediated Activity](Vygotsky, 1978, p. 54)

**Figure 1. Mediated Activity**
In addition, both are alike in their phylogenetic and ontogenetic relationships as well. The two are different, however, in the ways that they orient human behavior. Physical tools are used for “the mastering of nature” and signs are used for “the mastering of behavior” (p. 53). Physical tools function externally on an object of activity, while signs function internally enabling the mastering of oneself.

According to Lantolf and Pavlenko (1995),

The fundamental tenet of SCT holds that sociocultural and mental activity are bound together in a dependent, symbolically mediated, relationship. From this perspective, the ontogenetic development of children, for example, entails the integration of symbolically constituted mediational means into biologically specified patterns of behavior. (p. 109)

In the Vygotskian tradition of sociocultural theory, human beings are situated according to cultural and historical contexts, and these cultural and historical contexts of activity influence cognitive development.

The term semiotic mediation signifies that the human mind organizes the world by negotiating the meaning of signs and symbols presented in everyday sociocultural situations (Daniels, Cole, & Wertsch, 2007). Language is one of these semiotic systems. Daniels et al. (2007) also relate Vygotsky’s view of learning and development as mediated by semiotic systems, noting that the form of semiotic mediation that Vygotsky focused on was speech. Speech is a cultural artifact that shapes thought and action. Speech, in turn, is shaped by the people that use it. Lantolf (2000) also notes that it is a premise of sociocultural theory that thought and language are not separate systems, but dialectically linked, where speech influences thought and thought influences speech.
Related to this, second language learners are influenced by historical and cultural factors, which include gender, race, social status, nationality, and economic status. In Vygotskian terms, learners’ actions must be considered in relation to context.

With regard to second language learning, particularly within naturalistic contents, sociocultural theory holds that language learning does not merely encompass the mastery of linguistic forms, but an understanding of cultural norms as well (Lantolf & Pavlenko, 1995). Language is learned for the purposes of communication, and that communication occurs between people. Culture and circumstances play a part in how a dialogue is formed (Lantolf & Pavlenko, 1995).

**Performance as Mediation**

Newman and Holzman (1993) discuss the idea of performance as a mode of semiotic mediation, stating that “performing (in our school, theater, therapy sessions, production factories, electoral campaigns) is the varied and creative imitation of revolutionary activity, i.e. making history, making meaning, to reiterate a learning (cognitive, emotional, cultural, that leads development)” (p. 153). They discuss acting, a “conservatizing activity,” as the “dialectical opposite” of performing, where acting is merely “copying, mimicking, repeating without being ahead of oneself” (p. 153). Specifically, Newman and Holzman discuss the performance of roles.

Daniels, Cole, and Wertsch (2007) also discuss the concept of performance from a Vygotskian perspective, stating that gestures are part of a set of “cultural artifacts that are available to us as tools to assist our performance as actors in and on our worlds and to mediate what is culturally significant” (p. 87). Daniels, Cole, and Wertsch (2007) also
discuss role performance with regard to “roles that have become elaborated into identities” (p. 111).

Wells (1999) also adds “dance, drama, and musical performance” to Vygotsky’s modes of semiotic mediation when discussing learning and teaching within the ZPD, considering these “sources from which learners can receive assistance within the zpd” (p. 320). Wells broadens Vygotsky’s psychological tools as means for semiotic mediation. Finally, Kendon (1990) also refers to movement coordination in social interaction as “dance” (p. 100, 102). This was termed interactional synchronicity by Condon and Ogston (1996, 1967).

**Activity Theory**

Activity theory is an essential aspect of sociocultural theory (Wertsch, 1991; Lantolf, 2000; Lantolf & Pavlenko, 1995). A basic premise of activity theory is that a person does not merely engage in doing something. Doing something is always motivated by a biological need, such as hunger, or a culturally constructed need, such as the need to be literate, and this need turns to motive once it is directed at a particular object (Lantolf, 2000).

Leont’ev distinguishes between *activities*, which are motivated by these cultural goals, or biological needs, and *actions*, which are simply movements used to accomplish these meaningful activities. Thus, activities are composed of *motives, actions*, and the *conditions* under which these occur. Often, these activities are situated in social contexts and are completed with others. Only the *conditions* of activities are directly observable by others.
An example of these distinctions is provided by Leont’ev, who describes the hunting practices of tribal cultures. When hunting, different tribe members engage in different actions in order to participate in the activity of hunting for food, which is motivated by hunger. These actions may include beating a bush or drum to scare prey out of hiding place. If motivation for the beating of a drum is to create music, the same action is a different activity. Furthermore, if a person is shopping in a supermarket for food, this activity is the same as the hunting activity even though the actions used to find food are not the same. This is because the motives, satisfying the biological need of hunger, are the same (Lantolf, 2000).

A cross-cultural study by Wertsch, Minick, and Arns (1984) also shows how activity theory can inform social interaction in a puzzle-copying task. Two groups of adult-child dyads were observed: rural Brazilian mothers and their children and urban teachers and their students. The objective of the task was to reproduce a barnyard scene from a model. In the interactions of the teachers with the students, the teachers did not pick up any pieces for the children, nor tell them where to put any pieces. The teachers mediated the activity by simply providing a linguistic scaffold for the students, viewing the activity as an opportunity to teach children how to work with models. In contrast, in the interactions of the rural mothers with their children, the mothers told children exactly where to put the pieces, giving the children direct instructions. The mothers did not impart to the children an understanding of models.

The conclusion of the research was that the adults in the dyads had different motives. In the teacher dyads, the goal of the teachers was to teach the children. In the mother dyads, the goal was to produce an error-free model. The researchers reasoned that this
was motivated by the fact that in the rural communities of the mothers, income was
dependent upon production of products such as pottery and clothing, and mistakes would
prove costly in terms of materials or time wasted as a result of these errors. Thus, in
terms of activity theory, the dyads were participating in different activities.

In relation to second language learning in the classroom, learners may undertake the
same task, but the activity may be different, depending on motive. Coughlan and Duff
(1994) examined task-based performance of second language learners, not only finding
that different learners responded to the same task differently, but also noting that the
same learner may respond to the same task differently at another time (see also Brooks &
Donato, 1994).

In addition, Gillett (1994) undertook a study of three successful and three
unsuccessful second language learners in an intermediate-level French course at a
university in the United States. Gillett used essays, diaries, questionnaires, language
learning histories (based on biodata, interviews, and student comments), and class notes
as data sources. Gillett found that the beliefs of students based on their social histories
(viewing language as valuable or not) and their reasons for being in the course (viewing
the course as an imposed requirement or as an opportunity to learn a language) directly
influenced the learning strategies the students used. This, in turn, directly affected the
students’ success in the course. Those students who devalued anything foreign were less
successful, and those students who valued foreign culture and language were more
successful. In this example, although all of the students were displaying similar actions,
they were again engaged in different activities.
Finally, Thorne (1999) examined the role of the Internet in mediating second language learner communicative activity with instructors. Students reported feeling less culpable and less supervised, engaging in the use of inappropriate language while chatting. Of course, this language use was reprimanded by the instructor. However, this online environment also fostered fun, witty, and creative language use. Thus, the activity of communicating was altered in an online environment.

**The Ecological Notion of a Classroom.** In relation to activity theory, Lemke (1998, 2000) discusses an ecosocial semiotic approach to making meaning. Lemke argues that semiotic systems interact and meaning making is the result of a combination of multiple semiotic modalities.

Van Lier (2004) also discusses an ecological approach to second language acquisition, explicating the ecological notion of a classroom. Van Lier (2004) states “…that semiotics and ecology go hand in hand. That is, a semiotic approach to language leads to an ecological perspective on language learning (and use), and an ecological perspective on language leads to a placement of learning within a semiotics of space, time, action, perception and mind” (p. 55). This is an ecological-semiotic approach to language learning where language is part of a physical and social environment.

Thibault (2004) also discusses making meaning with regard to this ecosocial environment, stating that meaning is not stored at the level of the individual, but in all the systems related to agents and observers. Thus, meaning must be considered in relation to context.
Unit of Analysis

Vygotsky initially considered the appropriate unit of analysis for thought to be *word meaning*, where the connection between word and thought changes over time. Later, this unit was simply *meaning*. In contrast to Vygotsky, Leont’ev supported *tool-mediated, goal-directed* action as the most suitable unit. This unit of analysis is also supported by Wertsch (1991) who states that a fundamental aspect of sociocultural perspective is that descriptions and explanations of the human mind are viewed in consideration of performed *actions* which are goal-directed.

Genetics and Development

Vygotsky outlined four genetic domains to understand the higher function of the human mind (Lantolf, 2000). These are the ontogenetic, sociocultural, phylogenetic, and microgenetic domains.

The first, and most studied, of these is the ontogenetic domain, which consists of those aspects of development that focus on the appropriation and integration of mediational tools, such as language into thought. This is relevant when examining the gestures of an instructor in a language classroom and learners’ appropriation of gestures.

The second of these domains is the sociocultural domain, which considers the effects of cultural artifacts on thinking. Examples of these artifacts are alphabets, words, numbers, and computers.

The third domain is the phylogenetic domain. This domain considers the evolutionary development of higher human mental processes such as problem solving, logic, learning, planning, intentional memory, voluntary attention, and evaluation of these processes (Lantolf, 2000).
The fourth domain is the microgenetic domain, researched by Luria (1982) and well described within the field of gesture and speech in the work of McNeill (1992). This domain is concerned with the development of mediational forms focusing on a short period of time. In microgenetic analysis, the view is that the appropriation of thought, a word, or an expression is dynamic and unfolding, where the end form of the resulting product is embodied in the early stages of its development (Rosenthal, 2004).

**The Zone of Proximal Development**

A key concept in this discussion is Vygotsky’s Zone of Proximal Development, which is learning that takes place when the level of difficulty of subject matter is neither too easy nor too difficult for a learner to grasp. This is where social interaction helps to facilitate cognitive development. One of the main principles is that full cognitive development can only be realized with collaboration.

Vygotsky’s metaphor is that of ripening fruit. Vygotsky (1962) states, “What the child can do in cooperation today, he can do alone tomorrow. Therefore, the only good kind of instruction is that which marches ahead of development and leads it; it must be aimed not so much at the ripe as at the ripening functions” (p. 104). According to Vygotsky, development in the ZPD takes place when children engage in social behavior and receive guidance from knowledgeable adults or peers. This collaborative learning is greater than that which can be attained individually.

Human beings are not viewed as individual and alone. This idea is related to a central component of Vygotsky’s theory, which is how human beings learn. Rather than learning alone, learning takes place collaboratively. Essentially, participation leads to learning.
Vygotsky notes that schoolchildren were grouped into four categories prior to beginning elementary school based on their intelligence quotient, or IQ. After starting school, the children with initially higher than average IQs tend to lose points, and children with initially low IQs tend to gain points. In response to this problem, Vygotsky created the ZPD, stating that it is the distance between the actual and the potential development of the child.

**Internalization**

Learning is viewed first as occurring socially and is then internalized. Vygotsky (1978) stated that each function in the development of a child appears twice. It first appears on a social level between people, or interpsychologically. Later, it appears on an individual level inside a child, or intrapsychologically. This “internal reconstruction of an external operation” is called *internalization* (Vygotsky, 1978, p. 56). Vygotsky states that the process of internalization consists of a series of transformations:

1. An operation that initially represents an external activity is reconstructed and begins to occur internally.
2. An interpersonal process is transformed into an intrapersonal one.
3. The transformation of an interpersonal process into an intrapersonal one is the result of a long series of developmental events. (p. 56-7)

Initially, a child depends on external signs to mediate action. In later stages of development, a child undertakes a mediated activity internally and appears to abandon reliance upon signs. This abandonment, however, is an illusion. Vygotsky uses the example of gesture in a child, stating that finger pointing represents an interpersonal relationship, and only after this cultural form is internalized can an intrapersonal
relationship develop. When a child is merely attempting unsuccessfully to reach something, this is simply an external activity. When the child realizes that this attempt elicits a reaction from another person, the movement becomes a gesture. The end result is the internalization of a cultural form of behavior.

Language learning must also be viewed in the context of social interaction, and the gesture of others, specifically language instructors toward their students, is a form of social interaction worthy of attention. In relation to internalization, a student will initially view a gesture from an instructor as an external sign. The motivated student will appropriate the gesture, and this process will then be transformed into an internal one.

**Materialization**

Gal’perin’s (1989) view of the transition between material and ideal is also relevant to the current study in relation to gesture. For non-native speakers of a language, in the ideal plane, words are images in the mind. This ideal plane is influenced by the material plane, which is activity in the physical world (see McCafferty, 2006, 2008a; Roth, 2002). Gal’perin’s assertion was that material actions are internalized into mental processes through the use of cultural tools. The three stages in the process of this transformation are physical action, audible verbalization, and then internal speech (Stetsenko & Arievitch, 2002).

**The Relationship between Thought and Word**

Vygotsky (1962) describes the relationship between thought and speech, analyzing the early stages of anthropoid and child development. This is considered in relation to phylogenetic (species) and ontogenetic (individual) development. Vygotsky iterates that thought and speech are not inherited. Rather, they develop along with human
consciousness. In anthropoids, “speech and thinking are not interrelated,” and in children, thought can exist without speech and speech can exist without thought (Vygotsky, 1962, p. 119). Vygotsky asserts that a connection between thought and word begins, changes, and evolves over time.

Vygotsky states that the consideration of thought and speech as unrelated is incorrect, and these must not be considered isolated and separate. As stated above, in order to analyze verbal thought, Vygotsky felt that an appropriate unit of analysis was necessary and deemed this unit to be word meaning.¹ According to Vygotsky (1962), a word without meaning is merely “an empty sound” and meaning is “a phenomenon of thinking” (p. 120). Vygotsky (1962) states, “Word meaning is a phenomenon of thought only in so far as speech is connected with thought and illuminated by it. It is a phenomenon of verbal thought, or meaningful speech – a union of word and thought” (p. 120). Word meanings evolve throughout a person’s life, and if word meanings change, the relationship between thought and word also changes. Vygotsky (1962) summarizes as follows:

The relation of thought to word is not a thing but a process, a continual movement back and forth from thought to word and from word to thought. In that process the relation of thought to word undergoes changes which themselves may be regarded as development in the function sense. Thought is not merely expressed in words; it comes into existence through them. Every thought tends to connect something with something else, to establish a relationship between things. (p. 125)

In sum, the relationship between thought and word is dynamic.

¹ Since this time, meaning alone has become more important and making meaning has become regarded as the standard unit of analysis. Making meaning is the unit of analysis in the current study.
Thought and Language

Central to the ideas of Vygotsky (1962) is ‘inner speech,’ which is the psychological predicate of thought. According to Vygotskian theory, inner speech first begins to develop in children by being egocentric speech, or thinking out loud, to self-regulate behavior. Vygotsky (1962) notes that it is “speech on its way inward, intimately tied up with the ordering of the child’s behavior” (p. 46). This egocentric speech then becomes private speech, which is speech for the self that others can hear. Vygotsky viewed private speech as critical to a child’s cognitive development and eventual self-regulation.

Eventually, at school age (approximately age 7), this private speech becomes internalized to become inner speech. However, adults, when faced with difficult tasks or activities, will frequently engage in private speech, depending on the culture. The production of private speech by children is similar to the production of private speech by learners of a second language (Frawley & Lantolf, 1985).

In terms of regulation, object-regulation is when children, or in the current study, second language learners, find a task difficult and are controlled by the task. Object-regulation consists of metacommments related to the task at hand or task performance (McCafferty, 1994b). Other-regulation is where children, or second language learners, are controlled by others, generally in the form of verbal instruction. Other-regulation is where “subjects resort to a dialogically-based linguistic structure for seeking self-guidance which is reminiscent of the period in development when caregivers provided the primary source of mediation” (McCafferty, 1994b, p. 426). Finally, self-regulation is the ability to gain control over one’s own mental and social activities (Wertsch, 1979).
McCafferty (1992, 1994a, 1994b) has studied private speech used by L2 learners while performing communicative functions. McCafferty (1992) examined the use of private speech by adult second language learners, finding that for the same task, private speech decreased with an increase in proficiency levels. In a similar study, McCafferty (1994a) empirically examined the relationship between private speech production and proficiency level. The intermediate students in the study again produced more forms of other-, object-, and self-regulation when compared to advanced students, which would be expected in relation to Vygotskian theory. According to sociocultural theory, gestures are both for relating meaning to others as well as for self-regulatory, intrapersonal functions (McCafferty, 2006).

Inner speech is not representative of external speech. Inner speech consists of predicates to thought and is much more efficient. These are termed *psychological predicates*. Inner speech may consist of only one word in the individual’s mind, but that may be representative of much larger, more complex meaning. For example, Vygotsky (1986) indicates that if waiting at a bus stop, and the bus is coming, a form of possible external speech would be, “The bus that we are waiting for is coming.” However, inner speech might only include ‘coming’, or could even be something unclear to others in the current situation that only the thinker could understand (as cited in McCafferty, 1998a, p. 75).

**Luria**

In addition to Leont’ev, Vygotsky collaborated extensively with Luria. One of Luria’s contributions to sociocultural theory was a series of studies examining children’s use of language to mediate their physical behavior (Luria, 1979). In one of these studies, young
children were instructed to squeeze a rubber bulb when a red light appeared. Children from age two to two-and-a-half were not able to correctly complete the task. They pressed the bulb immediately when the instructions were given and stopped squeezing when the red light actually came on. Upon verbal instruction, these children squeezed more vigorously. In the same experiment, children between the ages of three and four were able to follow these instructions. Luria then changed the instructions for another experiment.

For the subsequent experiment, children were asked to do nothing when they saw a green light and squeeze the bulb when they saw a red light. Again, two-year-old children were unable to complete the task. Three to three-and-a-half year old children were also unable to complete the task. They would continue to respond if a green light followed a red light, and would do nothing for both lights if a red light followed by a green light. However, when children who were approximately three years old paired a verbal, “Yes,” or “No” with the respective lights, the children were able to respond correctly to the signals. After the age of six, children were able to perform this task without external self-regulatory verbalizations. Luria (1982) termed this “the psychophysiological foundations of the regulative functions of speech” (p. 96). The results of these studies indicate that language occupies an important role in the initiation and inhibition of behavior. These are fundamental aspects of planning, which is a higher mental function (Lantolf, 2000).

In addition to microgenetic research, another contribution from Luria (1979) was that a cultural activity such as schooling, and in relation to the present study, second language learning, can alter thought. Luria investigated intellectual functioning among adults in remote Russian villages in Uzbekistan and Kirgizia. Participants came from five groups:
illiterate women with no modern social interaction, illiterate peasants uninvolved in socialized labor, women who had taken some short courses in the teaching of kindergarteners, farm workers and young people who had taken some courses, and women students who had been admitted to a teaching school after two or three years of study.

In three types of the experiments, researchers studied linguistic categorization of color and shape, classification and abstraction, and verbal problem-solving and self-analysis. In the first type of experiment, participants were asked to name colored skeins of wool. Uneducated participants used few categorical color names. Instead, they used the names of objects in the environment such as “the color of mulberry leaves in the summer” and “the color of young peas” (Luria, 1979, p. 66). When asked to categorize the colors, many refused, arguing that the colors were all distinct. Others arranged the samples into a continuous series of colors increasing in hue or saturation. In contrast, those in the more educated groups used categorical color names and grouped the wool according to similar colors.

In the second type of experiment, participants were asked to group four similar objects. For example, an illiterate peasant was shown drawings of a hammer, saw, log, and hatchet. The response from the peasant was that they were all alike because in order for a saw, hatchet, or hammer to have a purpose, a log was necessary. Another grouping involved three men and a child. Again, the peasant stated that they all belonged together, stating, “Oh, but the boy must stay with the others! All three of them are working, you see, and if they keep running out to fetch things, they’ll never get the job done, but the boy can do the running for them…The boy will learn; that’ll be better, then they’ll all be
able to work together” (Luria, 1979, p. 69-70). As a final example, a participant was shown drawings of a bird, dagger, rifle, and bullet. Again, the response was that they all belonged together because the rifle and bullet were used to shoot the bird, and the dagger was used to clean the bird. When the experimenter questioned whether the bird belonged because it was not a weapon, the peasant’s response was, “No, the bird has to be there too. Otherwise, there’d be nothing to shoot” (Luria, 1979, p. 71).

Uneducated participants classified objects practically based on their role in particular situations as opposed to theoretically based on a common attribute. In addition, in all of the examples Luria provides, the uneducated peasants insisted that all four of the objects were necessary and rationalized a way for all of them to fit together. Those who were somewhat more educated, even with as little as a year or two of schooling, employed categorical classification in order to group objects. Luria’s (1979) conclusion was that “the primary function of language changes as one’s educational experience increases” (p. 72).

In the final type of experiment, the participants were given syllogisms such as “In the far north, where there is snow, all bears are white. Novaya Zemlya is in the far north. What color are the bears living there?” (Luria, 1979, p. 77). The response from those who were not schooled was often a refusal to make inferences based upon the fact that they had never been to the north and had never seen bears, and the way to get an answer to the question was to ask someone who had been there and had seen them. These villagers were able to reason and deduce logically in relation to practical situations; however, without having firsthand personal experience, they would not trust researchers’ claims in the syllogisms and were reluctant to make conclusions. Again, the more educated
participants responded as would be traditionally expected in modern societies. Luria’s conclusion was that a direct result of schooling was reformation of thought processes.

Luria (1979, 1982) also viewed the mind as a functional system that is not under control of the biologically given aspects of the brain, but is a functional system influenced electro-chemically by cultural artifacts, again with the focus on language. Vygotsky argued that in order for psychology to understand this functional system, the study of its history and activity (not structure) was essential (Lantolf, 2000).

**Bakhtin**

Sociocultural theory, in addition to being influenced by Vygotsky, Leont’ev, and Luria, is also influenced by Bakhtin, particularly in relation to dialogism. According to Bakhtin’s concept of dialogism, with regard to language and thought, every utterance a person makes is influenced by what others have said before and is in anticipation of what will be said after. Bakhtin’s view of semiotic mediation is that at least two voices are always present in one person’s speech: the voice of whomever is speaking and the voice of whomever has influenced the speaker. In Bakhtinian terms, words, after all, are not taken from the dictionary; they are taken from others.

Wertsch (1991) provides the example of a presidential speech to illustrate the understanding of dialogism with a sociocultural approach. Firstly, a presidential speech is generally the result of the work of many speech writers, which is a clear representation of dialogism in language. Additionally, the genre is the American political rhetoric, which is the culturally accepted form of speech. Finally, references to the past in political speech account for the assertion of historical influence in the theory.
Social, cultural, and historical contexts are fundamental aspects of the sociocultural approach to viewing the mind. Additionally, it is a premise of sociocultural theory that society uses tools such as language to mediate relationships with others. Furthermore, genetics and development are necessary subjects of study to understand mental processes. Finally, collaboration with others is necessary in order for full cognitive development to occur. In accordance with sociocultural theory, the methodological approach used in this research is a qualitative one.

**Summary**

The focus of this chapter has been to serve as an introduction to gesture in general, including a brief history of the study of gesture, the definition of gesture, and a sociocultural theoretical perspective of gesture and second language. The following chapter examines the link between gesture and speech, the importance of gesture in relation to semiotic development, the nature of gesture in the first language, gesture in relation to teaching and learning, gesture and second language learning, and the ways in which gesture has been considered in the classroom.
CHAPTER 2

THE IMPORTANCE OF GESTURE IN COMMUNICATION

The purpose of the first part of this chapter is to support the importance of gesture as an aspect of communication. This begins with theoretical models of speech and gesture production and is followed by a review of empirical gesture studies related to development. This discussion of development is organized ontologically. Also included is a brief summary of what has been found regarding the brain in relation to speech and gesture production. The purpose is to show that gesture is an important part of communication and cognition even though gesture has largely been ignored by linguists.

The second part of the chapter then addresses gesture in relation to first and second language concerns. This part of the chapter includes an extensive discussion of gesture in the language classroom as it relates to the present study. The argument is that not only speech but also gesture should be studied in relation to second language learning and teaching.

Theoretical Models of Gesture and Speech

The processes of gesture and speech are interrelated; speech cannot be considered alone when analyzing language (Kendon, 2004). Gesture is an integral part of language and occupies a pivotal role with regard to interaction and communication; however, Kendon (2004) states that how gesture is to be incorporated into a model of the speech production process “still remains a matter to be resolved” (p. 3). Nevertheless, Gullberg (2006) indicates that although debate still exists on the relationship of speech and gesture, the connection between the two is undisputed.
**Gesture and Speech as Two Aspects of the Same Process**

Kendon (2004) extensively describes how body movement and speech are intimately interconnected, citing several researchers including Bates (1979), who supported the view that “both gesture and spoken language develop together and that they both develop in relation to the same combination of cognitive capacities” (p. 76). Additionally, Volterra and Erting (1990) iterate that gesture and speech are differentiated manifestations of a more general process.

In relation to thought, McNeill (1992) states that gesture is idiosyncratic and provides a window into the mind of the speaker, revealing thoughts and feelings. Furthermore, speech and gesture develop from a ‘growth point’ in the mind, which is not developed linearly, but is present from the outset. Kita (2000) and de Ruiter (2000, 2007) also provide models for the process of speaking. De Ruiter (2007) describes three models for viewing the relationship between speech, thought, and gesture. The three models are termed the Language Architecture, the Postcard Architecture, and the Window Architecture.

In the Language Architecture, the linguistic properties of a speaker’s language influence gesture production. In other words, the typological structure of the language directly influences the types of gestures that are produced. In this architecture, gesture and speech arise from a single cognitive process, relying on interprocess communication to resolve conflicts between gesture and speech. This model is based on the research of Kita and Özyürek (2003).

In the Postcard Architecture, de Ruiter (2000) argues that gesture and speech are again planned together by a central process to form one multimodal message. In this
architecture, “…gestures are designed to communicate specific ideas to the interlocutor (together with speech)” (de Ruiter, 2000, p. 22, emphasis in original).

In the Window Architecture, gesture provides a window to the mind, revealing thought not intended to be displayed by a speaker. For example, speakers often unconsciously reveal emotions or feelings despite their intention not to do so. This is based on the ideas of McNeill (1992), Goldin-Meadow, Alibali and Church (1993), and McNeill and Duncan (2000). In the current study, the perspective is that of McNeill (1992) because of its sociocultural foundation.

McNeill (1992, 2005) builds on Vygotsky’s ideas to describe the relationship between gesture and thought, specifically how gestures affect a speaker’s thought. According to Vygotsky, thought is not merely expressed in words; words are needed to produce thought. A sentence begins as an “internal development,” and this internal development is termed microgenesis (McNeill, 1992, p. 218).

Regarding the interaction of gestures and speech, “…gestures and speech are closely linked in meaning, function, and time; they share meanings, roles, and a common fate” (McNeill, 1992, p. 218). They both refer to the same ideas. Gestures are imagistic, speech is linguistic, and they interact. They are the interaction of different types of mental operations.

As indicated above, central in this discussion of gesture and thought is what McNeill terms the growth point. A growth point is “the speaker’s minimal idea unit that can develop into a full utterance together with a gesture” (McNeill, 1992, p. 220). The growth point is a combination of image and word. McNeill (1992) gives the example of downward motion. Growth points remain consistent across languages; speakers in all
languages have growth points. However, a variety of growth points exist within an individual language. A final aspect of growth points is that the amount of gesture produced is directly proportional to the degree that the growth point departs from context. In other words, the more an idea departs from the context of a conversation, the more gesture is produced.

McNeill (1992) describes the relationship between thought, language, and gesture as a process where each of these coexist. McNeill writes that “…gestures do not just reflect thought but have an impact on thought. Gestures, together with language, help constitute thought” (p. 245, emphasis in original). Here, again, McNeill reiterates that speech and gesture are two aspects of one process where a dialectic of gesture imagery and linguistic structure exist. In this relationship between language and gesture, a slight anticipation of speech by gesture exists. In other words, the gesture begins slightly before the accompanying spoken component.

Again, gestures, which are idiosyncratic, are presented by the speaker when the utterance is a departure from context. In other words, when the speaker departs from the topic at hand, the speaker uses gesture as an indication of that departure. Also, gestures occur when the speaker considers his or her utterance to be somewhat inaccessible to a listener. In order to compensate for a potential difficulty a listener might have in understanding, the speaker uses a gesture. McNeill (1992) states, “…a gesture should occur exactly where the information conveyed is relatively unpredictable, inaccessible, and/or discontinuous…” (p. 208). Related to this fact is that gestures occur when the grammar of an utterance is more complex.
People use gestures to construct thought and meaning. Language and gesture combine to present this meaning. Metaphoric gestures exist in all cultures, but the gestures are culturally specific. Gestures that are a part of a culture have an influence on thought, and gestures reveal the imagery of thought. An important point is that “speech and gesture are coexpressive manifestations of a single underlying process” (McNeill, 1992, p. 31). Gestures are an integral part of language; gesture and language are one system.

In accordance with the view of McNeill, Goldin-Meadow (2003; see also 1999) points out that gesture “can reveal thoughts as well as feelings” (p. 12), first noting the numerous studies that have been conducted on gesture as a window to a person’s emotion and attitude (e.g., Argyle, 1975; Wundt, [1900] 1973; Feyereisen & de Lannoy, 1991). However, gesture also conveys a meaning, one that can provide ‘substantive information’ (Goldin-Meadow, 2003, p. 13). Goldin-Meadow’s example is one of a staircase; one can say, “I ran up the staircase,” but if the speaker produces a circular gesture, only then it is clear that the staircase was spiral. Goldin-Meadow asserts that gesture is often absolutely necessary for the spoken component of discourse to be understood. In addition to serving as a communication tool for listeners, Goldin-Meadow (1999) also regards gesture as a tool for thinking for speakers.

Goldin-Meadow (2003) states, “Word and gesture do not convey identical information, but they work together to more richly specify the same object” (p. 25). Goldin-Meadow describes, in previous work (Church & Goldin-Meadow, 1986), cases in which a speaker’s gesture and linguistic content convey a similar meaning are called gesture-speech matches, and instances in which the information does not overlap are called gesture-speech mismatches. The terminology, however, is confusing because it
does not indicate a conflict. Rather, it indicates that the information is supplemental as opposed to the same; Goldin-Meadow describes this as overlapping. Goldin-Meadow includes many situations in which mismatches have been observed, some of which are toddlers undergoing a sudden increase in vocabulary (Gershkoff-Stowe & Smith, 1997), children and adults discussing moral dilemmas (Church, Schonert-Reichl, Goodman, Kelly, & Ayman-Nolley, 1995), and adults narrating cartoon stories (Beattie & Shovelton, 1999a; McNeill, 1992; Rauscher, Krauss, & Chen, 1996). Gesture-speech matches are more common than gesture-speech mismatches. Schegloff (1984), a principal founder of conversation analysis, also provides a discussion on the relation of gesture to speech. Schegloff observes that hand gesturing is largely a speaker’s phenomenon, noting a few minor exceptions.

Kendon (2004) provides examples of gesture and speech formulated simultaneously, indicating that the relationship between gesture and speech is not a causal one and that speakers can manipulate speech and gesture according to the occasion. The examples illustrate how speakers adapt and adjust in order to repeat or revise information. In other words, “speakers have flexibility in how they organize their verbal and gestural components as they construct their discourses. Speech and gesture are partnered in the common enterprise of discourse construction. Neither is the cause nor the auxiliary of the other, nor is there an obligatory link between them” (Kendon, 2004, p. 128). This view of Kendon’s differs from that of McNeill. In repairing or revising an utterance, speakers may alter the gestural or verbal component or both.

Speakers, when pausing in speech, sometimes pause their gesture as well. The reverse also happens; when speakers repair a gesture, speech does not resume until gesture
resumes. Thus, gesture suspension is associated with speech suspension (Seyfeddinipur & Kita, 2001). Additionally, “the stroke of the gesture phase is placed in relation to the spoken component so that what is expressed in gesture is semantically coherent with what is expressed in words” (Kendon, 2004, p. 135).

Kendon (2004) also indicates that speakers adjust the production of speech so that a gestural expression may be performed at the appropriate moment. Speakers do this in three ways: speech is paused so that a preparation may be completed, speech is held to allow a stroke to be completed, and speech is held to allow a gesture to be performed in the absence of speech, to create a certain effect or to ensure that the next component of speech is intelligible.

Kendon (2004) points out that “gestural actions can only be given a precise interpretation when taken in conjunction with the words associated with them…” (p. 174). A speaker’s gestures provide spatial and orientation information that is not referred to in speech. The speaker uses gestures to specify size, shape, and outline. In addition, gestures indicate relative position and represent actions. Gestures can also be used to model. Furthermore, speakers are fluent when gesturing during narration, switching from the character viewpoint to the observer viewpoint.

Gestures describe verbs in more specific detail and allow for “a much richer experience” than can be given with speech alone (Kendon, 2004, p. 175). A speaker may say the word throw, but many different ways of throwing exist. Kendon (2004) states, “The relationship between word and gesture is a reciprocal one - the gestural component and the spoken component interact with one another to create a precise and vivid
understanding” (p. 174, emphasis in original). Gestures do not always accompany speech, but gestures occur when discontinuity exists.

**Gesture and Referential Meaning**

Kendon (2004) illustrates six types of contributions that gesture can make to the meaning of an utterance. To explain these contributions, Kendon defines what can be referred to as *narrow gloss* gestures. These are gestures “which are used in parallel with those words or phrases that are often said to be equivalent to them” (Kendon, 2004, p. 176). A speaker may appear to be redundant when using a narrow gloss gesture; however, the following contributions indicate that this is not the case.

According to Kendon (2004), the first type of contribution of a narrow gloss gesture is that a speaker can perform a gesture in order to provide emphasis, and a speaker can hold a gesture in order to prolong the representation of an idea or fix a concept in the mind of the audience. The second type of contribution is that narrow gloss gestures are also used to indicate something that is not uttered in words. In this case, gesture adds meaning to the utterance. The third type of contribution is that gestures can make a verb phrase more specific. Again, Kendon refers to the action of throwing; throwing a ball and throwing rice are completely different actions, and the type of throwing can be easily specified with gesture. A fourth contribution is that gesture may be used to illustrate an object that is being described in speech. A fifth contribution is that gesture may illustrate the size, shape, and spatial orientation of an object. Finally, the sixth type of contribution that Kendon relates is that gestures may create objects of deictic reference. These contributions are not exhaustive; they are merely the contributions that Kendon has observed so far.
Kendon (2004) indicates that narrow gloss gestures are more likely to be used when a speaker fears that a listener will not be able to fully understand an utterance without the use of gesture, or the speaker is worried that a listener will lose interest. Kendon goes on to point out that gestures are a much more efficient way to represent aspects of an object such as form, size, or spatial orientation, and this may be another reason that gestures are employed. Kendon (2004) states, “Often gestures are used to accomplish expressions that are in addition to or complimentary to what is expressed verbally” (p. 198).

**The Importance of Gesture in Semiotic Development**

The above theoretical models outline the relationship of gesture and speech. The following empirical studies support gesture as an important aspect of development and consider gesture in children, in the blind, and in relation to culture.

**Gesture in Children**

Children gesture when speaking (Jancovic, Devoe, & Wiener, 1975), when telling a story (McNeill, 1992), when asked to explain their solution to a problem (Church & Goldin-Meadow, 1986), and when explaining a game to an adult (Evans & Rubin, 1979). In addition, Crowder and Newman (1993) found that gesture can reveal the information students know about a topic.

McNeill (1992) indicates that children’s speech and gesture develop at the same time. According to McNeill, children between one and two either gesture or speak, but not both at the same time. At 12 months, concrete pointing occurs, but it does not occur with speech. From 12-18 months, whole body enactments are exhibited, and these are also exhibited in the absence of speech. From age two onward, gesture and speech are not separate. At the age of two, concrete pointing occurs with speech.
For children, from birth to age three, the initial emphasis of their gesture is on concrete objects. At ages three, four, and five, iconics and the beginnings of beats develop. The final stage of gesture development is discourse coding. At this time, beats, abstract pointing, and metaphorics develop. This period is the period of primary language acquisition. Gesture does not accompany speech at earlier ages. According to McNeill, the frequency with which children use gestures along with speech increases to an adult level at about age five (see also Nelson, 1996). Butcher and Goldin-Meadow (2000) also studied the development of gesture in children, finding that children do not begin to produce gesture in combination with words until the age of 14 months.

**Iconic Gestures in Children.** Iconic gestures are produced along with speech. Iconics in children up to age six have several characteristic features. First of all, the gesture space is the actual space; iconics are just as large as the action. Secondly, the gesture space of the iconic is centered on the child who makes gestures where the gesture space is spherical, and gestures can take place behind the body. Adults gesture only in front of themselves. In addition, children exhibit iconics with local orientation as opposed to the orientation of the room. Additionally, children display iconics using all relevant body parts. Children also use other body parts to perform gestures that adults do not usually employ (such as the elbow and foot).

The timing of the gesture is like the timing of a gesture in real action. Also, iconic gestures occur at the same time as a single word even though they may refer to an entire clause. Thus, the synchrony seen in adults is omitted by children. Finally, iconics recur two or three times to present the same meaning. In the movement from childhood to adulthood, less enactment and a greater use of symbolic gestures is exhibited. In addition,
with children, the character viewpoint is far more frequent; young children exhibit iconic gesture primarily from the character viewpoint as opposed to the observer viewpoint.

**Late Development of Gestures: Beats, Metaphorics, and Abstract Pointing.**

Beats, metaphorics, and abstract pointing are gestures that develop over a five- to seven-year span. Beats do not emerge in children until age five and are not abundant until age 11. It is ironic that concrete pointing is the first of all gestures to emerge, while abstract pointing is the last of all. Regarding this late development of abstract gestures, McNeill (1992) states, “the almost total absence of metaphoric gestures in children until a late stage of development thus emphasizes the importance of meta-level thinking in the creation of gestures of the abstract” (p. 179).

**Motherese (Caregiver Speech)**

Mothers change the nature of their gestures as well as their speech when talking to their children. McNeill (1992) cites Bekken (1989) who studied mothers talking to both adults and their children. When talking to an adult in a conversation, the mothers used, in order of frequency, metaphorics, deictics (abstract and concrete), iconics, and beats. When talking to their children, however, concrete deictics were the most frequent. Holding objects up or manipulating objects was the next most common. Mothers did not use gestures that were even somewhat abstract. In particular, the participants examined did not use metaphorics or beats. The degree of mothers’ changes in speech corresponded to the degree of changes in gesture. In addition, mothers used many more emblems with their children. Emblems were hardly used with an adult, but emblems were used with ten times the frequency of beats with children. Interestingly, the gestures children produced
at age two corresponded to the gestures that mothers used (concrete deictics and holding objects, but almost no iconics, metaphorics, or beats).

**Gesture in Relation to the Blind**

Blind speakers who are blind from birth gesture when talking even though they have had no visual model to observe (Iverson & Goldin-Meadow, 1998). Furthermore, when talking to listeners who are blind, congenitally blind individuals also use gesture. Iverson and Goldin-Meadow studied twelve blind and twelve sighted children who were matched on the basis of age, gender, and race. They found that the use of gesture by the blind children in the study did not depend on having a model to learn from. All twelve blind speakers gestured at a rate not statistically different from the rate at which the sighted children gestured. Additionally, the researchers examined four blind children who continued to gesture at a rate similar to that of sighted children even when the listener was blind. Even though the listener was unable to profit from the gesture, the blind children continued to use them. Therefore, the gesturing was not used in order to help the listener understand the meaning being conveyed.

**Gesture and Culture**

One important point on this topic of nonverbal behavior is that gesture in relation to communication varies greatly across different cultures. Even in countries such as England and the United States, where the same language is spoken, the nature of nonverbal behavior can be quite different. Kendon (2004) provides extensive evidence that gestures are culturally specific.

Efron (1941), a student of Boas’, also completed an extensive comparative study of the gesture styles of the East European Jewish and Southern Italian immigrants in
Manhattan. Efron found that the two groups differed markedly in their gestures. Efron found that Italian immigrants to the United States used more kinetographic and pictographic gestures than did Jewish immigrants. Furthermore, among the descendants of these groups, the more assimilated they were, the less their gestures differed, therefore, proving that gestures are, at least in part, culturally influenced.

Despite noting that some aspects of gesture are universal, Kendon (2004) also provides an example of how gesture does influence culture and describes cultural differences between gestures used by different people. Kendon cites social and historical contexts, describes Efron’s (1941) study of Eastern Jews and Southern Italians in New York City, and provides an example of Neapolitan gestural practices. Kendon examines how language might affect gesture and provides examples of gestural diffusion and historical persistence. Furthermore, Kendon offers many examples of comparative studies of quotable gestures and gesture in relation to language structure. Kendon states that differences in gesture are due to cultural and social history. The conclusion is that languages and gesture change over time, and this is the communication economy, a term which Kendon borrows from Hymes (1974).

Graham and Argyle (1975) found that Italian speakers pay closer attention to gesture than do English speakers. Furthermore, Italians use different emblematic gestures (Kendon, 1992). Farnell (2004) provides an overview of language gesture studies related to anthropology, discussing the work of anthropologists such as Tylor, Mallery, Sapir, Boas, Efron, Whorf, and Birdwhistell.

McNeill and Duncan (2000) provide another example of language differences and gesture. Mandarin speakers will gesture when uttering a noun in a sentence whereas
English speakers will gesture when uttering a verb. An example is the English sentence “The old lady hit him with a big stick,” with the gesture on *hit* as opposed to, “Old lady hold big stick hit him down,” with the gesture on *stick*.

**Motion Events as an Aspect of Culture.** Regarding differences in gesture according to language, speakers of different languages use different gestures to describe the same motion events. Specifically, Özyürek and Kita (1999) found that English and Japanese speakers used different gestures for the action of ‘swinging.’ The Japanese language does not have a term for the action of swinging, so Japanese speakers gesture to represent this action as a straight gesture, while English speakers use an arcing gesture. Furthermore, Turkish speakers use two separate verbs to indicate manner and path as in *rolling down*, and so use two separate gestures to represent *descend* and *rolling* (Özyürek & Kita, 1999; Kita & Özyürek, 2003).

The above studies illustrate the importance of gesture in relation to semiotic development. Related to this development is cognition. The following section outlines empirical studies of the brain in relation to gesture production. These studies also illustrate the importance of gesture with regard to communication.

**Gesture and the Brain**

**Mirror Neurons and Hand Movements**

Di Pellegrino, Fadiga, Fogassi, Gallese, and Rizzolatti (1992) studied the F5 neurons of the inferior premotor cortex of a macaque monkey in relation to goal-directed hand movements such as grasping, tearing, and holding. Incidentally, the researchers noticed that when the experimenter performed movements such as picking up fruit and returning fruit to a testing box, the same neurons being studied fired in the monkey despite the
absence of those movements in the monkey. Thus, the researchers surprisingly discovered that these neurons discharge not only during a hand movement, but also during the observation of a hand movement. At the end of their study, di Pellegrino et al. note that this area of F5 neurons corresponds in large part to Broca’s area of the human brain.

It is not surprising then that by studying the motor cortex of normal human subjects, Fadiga, Fogassi, Pavesi, and Rizzolatti (1995) found that the human brain functions in the same way (see also Rizzolatti & Gallese, 1997; Rizzolatti & Arbib, 1998). Gallese et al. (1996; see also Rizzolatti et al., 1996) replicated the Fadiga et al. (1992) findings, and name these neurons ‘mirror neurons’ due to the function they serve.

In relation to this, Jeannerod (1997) suggests that mirror neurons are the basis for imitative learning and empathy. Finally, Gallese and Goldman (1998) discuss mirror neurons and the simulation theory of mind-reading. They state that humans are capable of general mind reading, or an awareness of others’ mental states, by assuming the perspective of others through these mirror neurons. Therefore, gestures are an important part of communication.

**Handedness**

McNeill (1992) also discusses the brain, primarily describing handedness and brain impairments. For individuals who are right-handed, the left side of the brain controls speech and the right side controls spatial and visual operations. McNeill indicates that research studies on the topic of gesture show that people use their dominant hand to gesture. However, no such lateralization exists for hand movements that are not considered gestures, such as playing with hair or objects. Regarding specific types of
gestures, people who are right handed use their right hands to make iconic gestures, and those who are left handed use their left hands. To make beats, speakers exhibit no hand preferences; speakers use their right or left hand or both. Metaphorics are also performed with the dominant hand.

**Aphasia in Relation to Gesture**

Aphasia is the difficulty or inability to communicate with speech or in writing, which may be due to disease or injury of the brain. Two-thirds of aphasic patients also suffer apraxia, which is “a blockage of symbolic actions in which they are unable to pretend to carry out actions such as breaking an egg or hammering a nail, even though they can do both of these things with real objects” (McNeill, 1992, p. 329-330).

**Types of Aphasia.** McNeill (1992) discusses two types of aphasia in relation to gesture. The first is termed Broca’s aphasia and involves damage to the anterior portion of the left hemisphere, which is the language-dominant hemisphere. Patients are considered “nonfluent” aphasics because they have the ability to appropriately create imagery, but they are unable to produce the corresponding linguistic forms. They do not use a lot of words; however, Broca’s patients use gestures that are meaningful and interpretable. In addition, they have “extremely large gesture spaces of the type also used by young children, with gestures taking place high above their heads and often reaching far out into the periphery” (McNeill, 1992, p. 335-6).

The other type of aphasia is termed Wernicke’s aphasia. These patients have damage to the posterior part of the language-dominant hemisphere. People affected by this type of aphasia are considered “fluent aphasics” because they can speak well; however, they lack the ability to produce corresponding imagery. They use a lot of words when speaking. In
contrast to Broca aphasics, these patients use gestures that are “vague, meaningless, and uninterpretable” and use a gesture space that is similar to that of normal adult speakers (McNeill, 1992, p. 334-5).

The two kinds of aphasic patients present opposite patterns of imbalance during the interaction of imagery and language. The point of the discussion of aphasics is that “When the spoken output goes awry, gestures can proceed fluently and the idea unit be expressed in an appropriate iconic gesture” (McNeill, 1992, p. 339). In general, and in the case of aphasics, gesture is used to replace or compensate for speech.

**Gesture and Brain Hemispheres**

Commissurotomy patients have had their corpus colossum and other connections between the two cerebral hemispheres cut in order to treat epilepsy. McNeill (1992) reports of two right-handed patients (one male and one female) who were asked to retell a story portrayed in a cartoon. In both patients, the left hemisphere, which is image poor and language rich, controlled speech and gesture. One patient used only 11% iconics and 62% beats. People without brain disease or illness use approximately the same number of iconics and beats. With iconic gestures, perhaps speech and gesture are not fluent because when speech and gesture arise from the right hemisphere, the ability to produce linguistically is limited.

As a result of testing these two patients, McNeill (1992) determined, “*What the left hemisphere is unable to accomplish is fluent, narrative-level speech and iconic gestures at the same time*” (p. 354, emphasis in original). In individuals without brain impairments, the imagery for iconics can come from the right hemisphere, but this is
impossible in commissurotomy patients. When retelling narratives, speech is poor, but the gestures are appropriate. In non-narrative descriptions, speech and gesture are normal. Gesture is an important part of communication. It has been recognized in relation to development and cognition, and the following research also supports the importance of gesture with regard to first language considerations.

The Nature of Gestures in the First Language

Gestures and Intended Meaning

Approximately sixty-five percent of the intended meaning in a conversation is related through the use of gesture and other nonverbal behavior (Birdwhistell, 1952, 1970; Bancroft, 1997; Rimé, 1982). Pennycook (1985) cites Freud as having said that “he that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his finger-tips; betrayal oozes out of him at every pore” (p. 264). Nonverbal behavior clearly plays a pivotal role in the message that is communicated to others.

Gestures and Mental State

Freedman and Hoffman (1967) also make a similar statement, “Clinicians have repeatedly emphasized that it is important to observe as well as listen to the patient. Phenomena such as hand movements and posture seem to provide a rich reservoir of psychological hypotheses about the patient’s clinical state…” (p. 527). They go on to note that as patients improved in relation to their symptoms, the gestures they used increasingly corresponded to what they were saying. Basically, gesture revealed a great deal about the patients; their gestures went so far as to indicate the nature of their mental states.
**Gesture Frequency**

Rimé (1982) conducted a study of 40 male undergraduate students, putting half of the students in a face-to-face conversation and half the students in a situation without reciprocal visibility. One flaw in this study was that different participants were only in one of the two groups; the researcher should have examined each individual in both conditions as opposed to only one condition. However, Rimé found that there was little difference in the amount of gesture produced in the treatment conditions.

Speakers use gesture even when it is not seen by others (Cohen & Harrison, 1973; Rimé, 1982). Specifically, Cohen & Harrison examined 24 male participants at a university giving directions to someone both in person and via intercom. While it may seem to be common sense, they empirically proved that gesture is used more in face-to-face interactions than in situations where the listener cannot view the speaker. However, gesture was still used extensively by the speakers even when they knew that the listener was unable to see the movement.

Melinger and Kita (2001) found participants to use gesture more frequently when they were presented with a more difficult description task as opposed to one that was easier. The researchers also found that the amount of gesture production varied greatly among the participants.

**Gesture in Relation to Teaching and Learning**

**Teacher Talk**

Related to motherese is teacherese, or teacher talk, where teacher talk is defined as language used in the classroom for pedagogical purposes with qualities such as clear enunciation, simplified grammatical and lexical components, long pauses, gesture, use of
pictures and objects, repetition, reiteration, and reduced rate of speech. Another specific aspect of teacher talk is lengthening of speech components. Teacher talk is directed at students in the classroom, and it can be directed at students whose native language is the same as the language of instruction (Scott, 1998; Sinclair & Brazil, 1998). Teacher talk is commonly a component of early childhood and elementary classrooms (Wilcox-Herzog & Kontos, 1998; Wong-Fillmore, 1985). Wong-Fillmore (1985) discusses characteristics of teacher talk that are effective as input in elementary classrooms with students who are described as “limited in English proficiency” (LEP). These include the use of repetition, grammatical simplicity, demonstration, and redundancy (see also Cullen, 1998).

**Teaching and Learning Studies**

Roth (2001) conducted an extensive literature review on the topic of gesture in teaching and learning, including in the review an example of a physics explanation by a high school student. Roth showed that when listening only to the verbal component of a conversation, the meaning is not clear. Only with the gesture component is the listener able to understand the meaning of what is being said.

Goldin-Meadow et al. (2001) conducted a study on how gesture lightens cognitive load in relation to memory and the learning of mathematics. Forty children and thirty-two adults were tested. After being given math problems to solve, both groups were given a list of items to remember (letters or words). Then the groups were asked to give explanations for how they solved the math problem (while simultaneously remembering the list of letters or words). After the explanations, participants were asked to recall the list. One group was allowed to gesture during the math explanations while the other was not. The end result was that those participants who used gesture during the explanations
remembered more of the items than those who had not, either because they had elected not to gesture or they were instructed not to.

**Gesture and Second Language**

As the previous studies indicate, the literature to date in field of gesture is expansive. Additionally, extensive information exists on second language acquisition in classrooms; however, the same is not true for research combining both gesture and second language acquisition in classrooms. Because of the specific concerns of this study, to consider gesture in a second language classroom, all of the studies in the following literature review relate to gesture and second language learning in the classroom. Several are from a sociocultural theoretical framework, which relates to the current study. However, it is important to note that only a relatively small number of studies exist in this emerging area of research in comparison to those studies which focus on language.

**Organization**

The following studies, all of which relate to gesture and second language learning in the classroom, are organized according to content. The individual sections are as follows. The section begins with a discussion of foreigner talk. After a discussion of literature reviews on the topic of gesture and SLA, studies from a Vygotskian perspective are grouped together. This is organized according to: appropriation of gestures in a second language; gesture and the creation of zones of proximal development; gesture and internalization; gesture and self-regulation; and mimesis. This is followed by: gesture, language thinking patterns, and crosslinguistic influence; gesture frequency; recognition of emblematic gestures; reasons for studying gesture and second language acquisition; and, finally, studies which consider gesture and second language learning in the
classroom. When studies consider similar subject matter, they are organized in chronological order.

**Foreigner Talk**

Foreigner talk is different from teacher talk in that foreigner talk is directed at foreigners—those who are not native speakers of the language being spoken; in addition, foreigner talk occurs more in conversations outside of the classroom. Hock and Joseph (1996) define foreigner talk as an “increase in volume, a decrease in speed, and a chunky word-by-word delivery” (p. 421). In addition, they define foreigner talk as being characterized by simplification and attrition of lexicon, syntax, and morphology. Regarding lexicon, attrition of articles (*a, an, the*) and conjunctions (such as *and, or, but*) characterizes foreigner talk. In addition, onomatopoeia is used. Also, colloquial expressions are used more frequently, which is contradictory to the fact that slang and idiomatic expressions are not as easily understood by language learners. Furthermore, “words that sound vaguely international such as *kapeesh*” are used (Hock & Joseph, 1996, p. 421). With regard to syntax, foreigner talk is characterized by an absence of relative clauses and other dependent clauses. Finally, Hock and Joseph (1996) state that morphological simplification results in inflection being omitted, and “where ordinary English distinguishes *I* vs. *me*, Foreigner Talk tends to use only *me*” (p. 421).

Bingham Wesche and Ready (1985) studied foreigner talk in the university classroom. The researchers studied two university professors’ psychology lectures to second language learners, and in other sections of the same course, to native speakers. Therefore, each professor served as a control, allowing the researchers to analyze the similarities and differences when addressing native and non-native speakers with the
same content. One professor was a native English speaker and the other was a native French speaker. The researchers found that each professor exhibited qualities of foreigner talk in the classroom situation with nonnative speakers when compared to the same situation with native speakers. In addition, each professor’s speech characteristics were predictors of that professor’s foreigner talk characteristics.

Adams (1998) conducted a study on foreigner talk in order to determine whether native speakers of English modified their gestures in addition to the modification of speech when speaking to non-native speakers of English. The study examined the modification of gestures as well as whether these gestures were functionally similar to foreigner talk. Statistical interpretation indicated an increased frequency of use by native speakers for deictics and, to a lesser degree, iconics. Qualitative interpretation indicated the use of pantomime, metaphors, and emblems to also promote comprehension. Non-native speakers in the study were surveyed, and they did not have a negative view of the gestures of the native speakers.

**Literature Reviews of Gesture and Second Language Acquisition**

Gullberg and McCafferty (2008) argue for the need to integrate gesture investigation into the field of applied linguistics, specifically second language acquisition. They also review current theories of the relationship between speech and gesture. In addition, they discuss gesture and communicative and psychological development. Stam and McCafferty (2008) also provide a thorough literature review of the topic of gesture and second language acquisition, providing examples of the role of gesture in the language acquisition process. Chamberlin-Quinlisk (2008) also provides an extensive review of studies considering nonverbal behaviors (NVBs) and their role in classroom
environments, which is that NVBs contribute significantly to the co-construction of meaning and to the signaling of power and immediacy, which results in positive learning outcomes. The studies related in the above literature reviews provide extensive support for the current study, providing strong and compelling evidence that gesture is an integral component of the process of SLA.

**Gesture in Second Language Learning and Teaching from a Vygotskian Perspective**

**Appropriation of Gestures in a Second Language.** McCafferty (1998a) studied eight adult English as a second language students in order to analyze their use of nonverbal behavior in the L2 in relation to private speech. Subjects were from Japan and Venezuela. The results indicated that gestures were culture-specific as well as proficiency-related, and that gestures and nonverbal behaviors were related to self-regulation.

With regard to the Japanese participants, the results showed that Japanese speakers exposed to American culture, even for short periods of time, were able to produce an emblematic gesture—the traditional gesture for ‘I don’t know’/uncertainty, which is indicated by putting one’s arms out to the sides with the palms up. The appropriation of this gesture was found in conjunction with L2 private speech. In addition to the appropriation of this gesture, the Japanese subjects also used shoulder shrugs, which are not a traditional nonverbal from of Japanese communication.

McCafferty (2002) also reports similar findings from a longitudinal study to examine whether students exposed to naturalistic and/or mixed contexts (living and/or studying in an environment where the language is the dominant language) appropriate nonverbal forms of communication. McCafferty found that in conversations with a graduate
assistant, a Taiwanese English as a second language student appropriated iconic gestures, using gestures as a form of self-regulation and other-regulation. The appropriation of palms-up bounded container gestures was particularly significant (see also McCafferty 1998b).

Building on previous work, McCafferty and Ahmed (2000) examined the appropriation of gestures of the abstract by ESL learners from Japan who had immigrated to North America as adults. They found that the learners, who had learned ESL primarily from naturalistic contexts, had appropriated a bounded, one-handed container gesture of the abstract. This was in contrast to the other Japanese participants considered in the study who had learned English in classroom contexts or were simply L1 Japanese. Another result of the study in relation to the naturalistic learners was the appropriation of the perception of self, which, in terms of gesture production, appeared more similar to that of monolingual Americans.

**Gesture and the Creation of Zones of Proximal Development.** McCafferty (2002) examined how gesture and speech facilitated the creation of zones of proximal development (ZPD) for second language learning and teaching. The Taiwanese student appropriated gestures from the speaker, imitating the English speaker’s gestures. The native speaker also imitated gestures from the student. The participants also mirrored each other’s gestures and posture. McCafferty discusses the use of space to create shared experiences and notes the intrapersonal transformation the student underwent during the course of the study. The use of illustrators served a self-regulatory function.

The results showed that the use of gesture by the participants facilitated language learning and a positive interaction between the student and graduate assistant, resulting in
enhanced communication and comprehension. McCafferty (2002) states, “Through creating a shared history of signs, the participants scaffolded each other in their efforts to co-construct meaning and provide the sense they wanted to convey…” (p. 196). Furthermore, the use of gesture helped “to create a sense of a shared social, symbolic, physical, and mental space” (McCafferty, 2002, p. 192). McCafferty observed that the use of gesture also helped to promote intersubjectivity between the participants. The conclusion was that second language students imitate native speaker’s gestures in order to make meaning in the process of acquiring language. These observations are evidence of the role gesture plays in creating zones of proximal development for second language learners (see also McCafferty, 2000).

**Gesture and Internalization.** Regarding the process of internalization, McCafferty (2004b) examined the use of spatio-motoric skills to acquire language as well as intra- and interpersonal functions of gesture. The findings suggest that gestures are used for intrapersonal problem-solving. The learner also used beat gestures to internalize the prosodic features of the second language.

McCafferty (2008a) examined the L2 metaphoric gestures and verbal conceptual metaphors of one adult English as a second language speaker from Japan discussing ideal marriage. The participant not only appropriated, but also internalized a North American model of marriage as was evidenced in the metaphoric gestures produced for thinking and communicating. McCafferty discusses Gal’perin’s (1989) theory of materiality and its effects on mental development, noting that the student’s use of metaphoric gesture was “a primary vehicle for materializing conceptual meaning” (p. 63).
**Gesture and Self-Regulation.** McCafferty (2006) further examined beat gestures used simultaneously with speech, finding that beat gestures separated words into syllables. McCafferty concluded that the functions of the gestures were self-regulatory, and these beats are part of second language acquisition, providing a kinesic, or physical, representation for the prosodic features of the language being learned.

Lee (2008) studied gesture, private speech, and private writing in seven adult Korean students studying biology at a university. All of these students were advanced English as a second language students. These students were each observed while they were studying alone for a biology examination. Students used gestures together with private speech as a form of self-regulation. This was viewed as a dialogic interaction with the self. Gestures were also used to scaffold the students’ reading of the texts.

Similarly, Platt and Brooks (2008) studied embodiment as a form of self-regulation in L2 task performance. They found that in addition to gesture, the undergraduate Swahili learners used gaze, body movement, and physical contact with task materials to achieve self-regulation in the L2.

Negueruela, Lantolf, Rehn, and Gelabert (2004) also relied on Vygotskian theory to frame their study of gesture in relation to second language use. They considered both inner speech and Bourdieu’s *habitus*, which is “…the bodily counterpart of inner speech…” or “…a set of bodily dispositions arising from the person’s accumulated experience of social activities…” (p. 141). The researchers concluded that the participants were using inner speech and habitus as mediational signs to make meaning for themselves. However, the students were only engaged in the language learning activity intrapersonally and not socially, or interpersonally, because, according to this
study, the gestures exhibited did not indicate the adoption of L2 thinking for speaking patterns when narrating in the L2.

Negueruela and Lantolf (2008) also studied the communicative and self-regulatory functions of gesture, studying the iconic and deictic gestures used in the relation of oral narratives. The researchers focused on gestures that were not synchronous with speech or lacked co-expressivity with speech and examined how these gestures related to the construction of meaning in a second language. The authors argue that gestures serve both a self-regulatory and communicative function.

**Mimesis.** Using sociocultural theory as a framework, McCafferty (2008b) discusses the importance of gestural forms of mimesis in second language acquisition, arguing that mimetic forms are used for communication, learning, and thinking in the second language. McCafferty uses the frameworks for mimesis outlined by Donald (2001), who asserted that mimesis is an essential aspect of both communication and culture, and Nelson (1996), who observed that mimetic actions in children precede language and are instrumental in their development of language. Also drawing on the work of Gal’perin (1989), McCafferty argues that people are affected by their material experiences and operate at more abstract levels only with development or self-regulation. Furthermore, mimetic representations help to establish identity in a language and culture. The conclusion is that mimesis is an essential aspect of second language acquisition for both creating meaning and establishing identity.

**Gesture, Language Thinking Patterns, and Crosslinguistic Influence**

Several studies discussed below (Negueruela, Lantolf, Rehn, & Gelabert, 2004; McNeill & Duncan, 2000; Stam, 2006, 2008; Yoshioka & Kellerman, 2006; Yoshioka,
have been conducted on crosslinguistic influence using Talmy’s (1985, 2000) typological distinction between languages that are satellite-framed or verb-framed with respect to the expression of path of motion. In a satellite-framed language, manner is encoded in the verb and path is expressed via satellite phrases. In a verb-framed language, the verb expresses the path of motion and other words or gesture express manner. Brown and Gullberg (2008), discussed below, provide examples. In English, which is a satellite-framed language, the main verb indicates manner as in “The ball rolls down the hill” (Brown & Gullberg, 2008, p. 227-8). In Japanese, which is a verb-framed language, the main verb in a sentence indicates path and a subordinate verb or adverbial indicates manner. Examples of these Japanese sentences translated into English are “The ball goes rolling on the hill,” or “(It) rotates while descending the hill” (Brown & Gullberg, 2008, p. 227-8).

Using this distinction, Negueruela, Lantolf, Rehn, and Gelabert (2004) examined the “private function” of gesture in a second language speaking activity. This was a study of motion verbs and gesturing in both English and Spanish. They replicated previous findings that path gestures in Spanish occur with verbs and path gestures in English occur on satellites (see also McNeill & Duncan, 2000). They also found that Spanish learners of English and English learners of Spanish maintained L1 thinking for speaking patterns when narrating in the L2, as indicated by the placement of path gestures.

Stam (2006, 2008) conducted similar studies, finding that Spanish students learning English used their L1, and at times L2, thinking patterns when speaking fluently in the L2 about motion. The gestural component indicated the thinking patterns, showing that the second language learners had not yet acquired the L2 thinking for speaking patterns.

Choi and Lantolf (2008) studied thinking for speaking patterns in relation to McNeill’s (1992, 2005) growth point hypothesis. The participants were advanced English speakers whose first language was Korean (a verb-framed language) and advanced Korean speakers whose first language was English (a satellite-framed language). Choi and Lantolf found that the speakers, although proficient in the L2, retained L1 thinking for speaking patterns when speaking in the L2.

Brown and Gullberg (2008) studied bidirectional crosslinguistic influence in adult Japanese speakers of English, finding bidirectional influence of languages. In this study, the analysis of gesture, as opposed to speech alone, allowed for deeper insight into these influences. They examined manner of motion in monolingual speakers of Japanese, monolingual speakers of English, and intermediate Japanese speakers of English. Both speech and gesture differ when referring to motion in English and Japanese. Influences of the L1 on the L2 and the L2 on the L1 were found for the Japanese speakers. These findings extend the findings of previous studies and indicate that researchers should be cautious about native speaker populations used in studies such as those indicated above because a native speaker’s baseline L1 thinking for speaking pattern is influenced by an L2. Thus, an L1 baseline thinking for speaking pattern may actually be an L1/L2 baseline thinking for speaking pattern.

**Gesture Frequency**

Gullberg (1998; see also Marcos, 1979; Kita, 1993) found that speakers use gesture more in their L2 than in their L1. Hadar et al. (2001) also found that gesture rates were
higher for picture description than for translation in a study of native speakers of Hebrew when speaking English as a second language. The researchers found that these language learners used gesture as a salient part of their process of language acquisition.

**Recognition of Emblematic Gestures in the L2**

Mohan and Helmer (1988) found that when preschool children were exposed to English as a second language in naturalistic conditions, the children were able to comprehend the L2 gestures. Native speaking children understood approximately half of the gestures tested, and non-native speaking children understood slightly less than half of the gestures (see also Safadi & Valentine, 1988; Wolfgang & Wolofsky, 1991).

Jungheim (2006) examined the response of native Japanese speakers and Japanese learners to a culturally specific Japanese refusal gesture, finding that native speakers of the language were better able to recognize the meaning of the gesture as a refusal. Additionally, learners were found to have difficulty reproducing the gesture. Finally, when asked to rate their ability to determine the meaning of the gesture as easy or difficult, both groups rated the gesture as easy to understand although performance proved this to be the contrary, particularly for the second language learners.

This study showed that, as a group living in Japan for more than six months, Japanese language learners had not acquired the ability to recognize the meaning of this gesture. Jungheim calls for further research in the realm of second language acquisition of conventional gestures. The conclusion is that “the study of conventionality and the second language acquisition of gestures is a small niche in the vast area of gesture studies and second language acquisition, but it cannot be ignored” (p. 141).
Reasons for Studying Gesture and Second Language Acquisition

Gullberg (2006) outlines the many reasons for studying gesture and second language acquisition, citing the fact that gestures are cross-cultural and their acquisition can be studied. In addition, gestures can provide insight into the process of language acquisition. In relation to the concerns of the current study, to investigate the role of gesture in a second language classroom, Gullberg confirms the need for this type of research.

Gesture in the Language Classroom

In some of the earliest considerations of gesture in the classroom, Saitz (1966) and Beattie (1977) were early proponents of addressing the issue of gesture in the classroom. Saitz notes that for English as a second language teachers, the best source for emblematic gestural information in the classroom is the teacher who should merely observe the cultures of the languages spoken by the students. Saitz makes a few brief recommendations for the ESL teacher on how to incorporate gesture teaching into the classroom. Few references are mentioned because, as noted by Saitz, systematic studies of gestures at that time were rare.

Although neither conducted a study examining gesture in relation to language, Antes (1996) and Al-shabbi (1993) also attempted to address the issue of nonverbal communication in the second language classroom. Antes described the value of gesture and facial expression in language and in the language classroom, discussing the pedagogical implications of teaching kinesics. Al-shabbi made suggestions for handling gestures in the Communicative Language Teaching English as a second/foreign language classroom. Antes and Al-shabbi were two of the many researchers stressing the need for attention to gesture in the classroom.
Allen (1995) conducted a study with 112 post-secondary learners of French in their first semester of study. The results indicated that those students who learned emblems simultaneously with French expressions exhibited greater recall ability of the expressions on posttests than those students who had not learned the emblematic gestures.

Hauge (2000) examined the role of emblematic gestures in the British English university classroom, finding that traditional L2 gestures performed by English as a second language teachers were confusing to students as the gestures had a different meaning in the L1. Furthermore, teachers were unaware of the cultural differences of gestures they produced (as cited in Gullberg 2006).

Allen (2000) also observed one female teacher in a classroom setting. The teacher taught high school Spanish. Allen found that the teacher’s use of gesture was extensive, providing a thorough description of the types of gestures used. In addition to analyzing the movements of the teacher, Allen asked students about their perceptions of the teacher’s gesture. The students “overwhelmingly supported” the idea that the teacher’s gesture aided their comprehension (Allen, 2000, p. 169).

Harris (2003) examines gestures and other non-verbal behavior in both a three-turn conversational exchange and a scripted television excerpt. Although Harris did not specifically examine second language learners in the classroom, emphasis is placed on the importance of speech-related gestures in the language classroom. Harris argues that aspects of non-verbal communication should take a more central place in second and foreign language teaching. Harris found that gestures allowed for the decoding of speech during second language listening comprehension. Harris discusses the implications for L2 pedagogy, specifically listening comprehension, stating that the methodology used by
teachers to teach listening comprehension skills should include providing students with strategies to “raise awareness about the link between individual lexical units and illustrative gestures as a means of decoding speech at the while-listening stage of listening comprehension” (Harris, 2003, p. 185). Furthermore, Harris states that strategy training should include identifying the meaning of gestures where the gesture broadens the meaning of its lexical affiliate.

Lazaraton (2004) conducted a microanalytic study of the speech and gestures used by one nonnative English as a second language instructor in an intensive English program. The intermediate-level grammar course was videotaped, and excerpts of unplanned vocabulary explanations that occurred during three lessons were transcribed. Lazaraton analyzed the speech, gesture, and other non-verbal behavior used as part of these explanations.

Lazaraton specifically considered data from vocabulary explanation sequences, finding that the teacher used a variety of gestures when giving explanations for 18 lexical items. The types of gestures and nonverbal behaviors used included iconics (both kinetographic and pictographic), emblems, metaphors, deictics, beats, and whole body movements. The majority of the words explained were verbs, and for the simplest verbs, gestures were primarily used to convey the meaning. Upon reading only the verbal transcriptions of the words the teacher used in the lessons, it would be difficult to ascertain the methods by which the teacher was able to convey the word meanings. The gestures appeared to add important information to the explanations being given. Lazaraton points out that students were not asked their opinions of the gesture usage—whether the students understood the explanations or considered the gestures useful.
Overall, the study findings “[exemplified] the inherent synchronicity of speech and gesture” (Lazaraton, 2004, p. 100).

The results indicated that gestures are a significant component of pedagogy in the second language classroom. Lazaraton (2004) claims, “classroom L2 learners receive considerable input in nonverbal form that may modify and make verbal input (more) comprehensible” (p. 111). Clearly, gestures are an integral part of classroom discourse as supported by Lazaraton.

Of note in this study is that Lazaraton addresses the need to further study pedagogical performance. In this study, the instructor stated,

…I used a lot of hand gestures. I probably do when I teach hoping that it helps get my ideas across. I feel like employing anything that might help me communicate better. Gestures and even facial expressions also seem to attract students’ attention. In that sense, teaching is somewhat like acting. (p. 107)

The instructor was aware of her “acting,” and Lazaraton notes that this form of input to second language learners in the classroom is worthy of attention.

Lazaraton and Ishihara (2005) undertook a collaborative study, examining through microanalysis and self-reflection one segment of the grammar component of a university English as a second language class. Ishihara was the ESL instructor and was a non-native speaker of English from Japan teaching in an intermediate-level grammar classroom. Lazaraton, as discourse analyst, focused on observing all forms of nonverbal behavior, including gestures, gaze, and body position. The researchers provide insight on the nonverbal component of the instruction, particularly during the unplanned vocabulary explanations that occurred during the grammar explanations.
Although the main purpose of this study was to explore the relationship between the teacher’s speech and the teacher’s knowledge and beliefs, the authors found that gesture played a significant role in the lesson. Specifically, the teacher in the study personally concluded that

[non-verbal behavior] can certainly be an effective teaching aid that can bolster both teaching and student comprehension, provided that it is used in a pedagogically and culturally appropriate manner. To be effective, non-verbal behavior must be coordinated with the verbal counterpart in a non-obtrusive way, and used to send a consistent message. (Lazaraton & Ishihara, 2005, p. 537)

Despite this feeling of the teacher and the results of Harris (2003) that reported enhanced listening comprehension due to the use of illustrators, Lazaraton and Ishihara (2005) note that no claims can be made about whether the gestures in this classroom study enhanced the learning process due to the brevity of the segment analyzed, and no students were consulted in this study. The authors also indicate “knowing no reliable or valid way of assessing the value of nonverbal behavior in student understanding or learning” (p. 538).

One implication Lazaraton and Ishihara state is that because of the culturally-specific nature of emblematic gestures, second language teachers must be aware of their behavior in order to avoid confusing students. Lazaraton and Ishihara further assert that teachers must be aware of the best ways to use gesture in second language instruction while noting that the study makes no claims about this; only insights are provided. Regarding nonverbal behavior, Lazaraton and Ishihara (2005) state, “…if no training is provided on its effective application, it is likely that language teachers will use it without ever...
reflecting on or analyzing how such behavior is implicated in learning in the L2 classroom” (p. 539).

Sime (2006) interviewed 22 English as a foreign language learners regarding their perceptions of the functions of gestures and nonverbal behavior used by teachers in the classroom. Using stimulated recall, learners described three functions of the gestures in the classroom: cognitive, emotional, and organizational. The cognitive function enhanced student understanding, the emotional function helped the students to better understand the feelings and attitudes of teachers, and the organizational function was related to aspects of classroom management. All of the learners reported that the gestures and other nonverbal behavior of the teacher were important, conveyed meaning, and contributed to learning.

Sime also found that learners’ interpretations were based on three types of prior knowledge, which were individual knowledge, setting knowledge, and social knowledge. Individual knowledge is prior knowledge about the teachers’ personality, culture and motivation. Setting knowledge is related to pedagogy, teaching methodologies, and teaching style. Social knowledge is knowledge about social rules and conventions. Finally, Sime observed that students’ interpretations were more likely affected by personal factors like personality, gender, and culture than social status, teaching objectives, and cultural differences.

Zhao’s (2007) dissertation research examined the use of metaphorical gestures in four university ESL composition classes. Zhao observed and videotaped four instructors and 54 ESL students during naturally-occurring settings: class observations, student-teacher conferences, peer reviews, and student presentations. Zhao analyzed teacher and student
metaphors and gestures related to academic writing, finding that the teacher-presented metaphors, and the gestures which were used to conceptualize those metaphors, assisted in the learning process.

Zhao found twelve gesture patterns exhibited by the instructors to represent abstract metaphors. Six of these twelve gesture patterns were exhibited by the students, which was evidence of learning rhetorical patterns of academic writing. Zhao also conducted interviews with the ESL students in which the students expressed the perception that the metaphors were helpful regarding composition instruction. In contrast, the students did not perceive the gestures as beneficial to the process of learning metaphors related to abstract mental representations of academic writing. One rationale for this assessment is that verbal expression of metaphors is more easily perceived while gestures other than emblems are often unconsciously understood.

Sime (2008) again considered student perceptions of teachers’ gestures, examining five English as a foreign language classrooms. All of the learners reported that the gestures were helpful in relating meaning and enhancing comprehension. They also reported that the gestures contributed positively to the process of classroom interaction. Sime (2008) concluded that the gestures were “perceived as providing scaffolding assistance within the ZPD” (p. 264).

Faraco and Kida (2008) examined second language learners of French in whole-class and paired conversational situations, describing how nonverbal forms of communication such as gesture, gaze, and prosodic features contribute to the negotiation of meaning.

Tabensky (2008) also examined French second language learners in the classroom, focusing on how gestures are used in expository discourse and spontaneous interaction.
Nine university students of three different ability levels were observed in this study. Two predominant types of gestures were found in expository discourse. The first were “presentational gestures” that presented an utterance to the audience. The second were “representational gestures” that offered a visual representation of the idea being expressed. In addition to expository discourse gestures, Tabensky also examined the effect of language proficiency on gesture use, finding that the use of gesture is dependent upon the mode of delivery (students who read a presentation do not use presentational gestures at all). However, regarding the gesture use of other students, language ability did not appear to be the only factor determining the types of gestures used.

Nardotto Peltier and McCafferty (2010) studied gesture and identity in the teaching and learning of Italian. The researchers observed teachers of Italian as a foreign language, finding that while they were aware of the importance of students being exposed to Italian forms of gesture in order to truly learn the language, the instructors were unaware of the very Italian nature of their gesture use. In addition, the researchers surveyed the teachers’ students who reported that they were aware of the teachers’ gestures, and they helped to clarify meaning.

In the study, one instructor noted how she specifically tried to get the students to use Italian gestures by imitating her. Though she never specifically referred to the term gesture, she indicated her belief that it is beneficial for students to use gestures, and she explicitly stated that she was aware of encouraging students of Italian to imitate her because gestures are a significant aspect of learning the language. She tried to get the students to learn gestures before going to Italy, knowing that it was helpful if they copied
her. Interestingly, however, when the instructor watched a videotape of herself while teaching, she was unaware that she gestured so frequently.

**Rationale for the Current Study**

As the studies above indicate, the topic of gesture in the second language classroom is an emerging area in the literature and would greatly benefit from further research. The current qualitative study of a second language instructor and her students in an ESL classroom is a contribution to this expanding subject of study.

The above studies also support the fact that it is useful to ask more teachers how aware they are of the gestures and other nonverbal behavior that they exhibit. More research is necessary to consider how instructors specifically manipulate their gestures in the classroom and which gestures they specifically teach.

Further research is also needed in the area of qualitative studies, asking second language students about their awareness of the gesture that is used by their instructors in the classroom and how they feel about it. In addition, it is necessary to further determine how much students themselves are aware of their utilization of gestures in their negotiation of meaning and how gestures affect mediation overall in second language learning.

**Summary**

McCafferty (1998a) states, “Gestures and other nonverbal forms of communication have been considered potentially important for some time, however, as yet, their connection to second language learning largely remains to be elucidated” (p. 94). Although this comment was made over a decade ago, this comprehensive literature review proves that this is still true, specifically in the classroom.
More recently, Lazaraton (2004) more specifically states,

…when we view a videotape of ESL classroom teaching, it becomes immediately apparent that an analysis of teacher talk is really insufficient; the teacher’s nonverbal behavior is also clearly a fundamental means of communication. In fact, neither SLA researchers nor language teacher educators can afford to overlook any longer the fundamental (but, as yet, largely unexplicated) role that nonverbal behavior plays in the input to and the output from L2 learners. (p. 90, emphasis in original)

Though this statement is with regard to one theory of acquisition, it is pertinent to this study as well.
CHAPTER 3
METHODOLOGY

Research Questions

The purpose of this research was to examine the role of gesture in second language teaching and learning in the classroom. The following questions were considered by designing a qualitative study from a sociocultural theoretical perspective. This study examined gestures (movements of the hands and arms) used in the classroom by one instructor of English as a second language and the students in her course. In research from this theoretical perspective, a classroom can be conceived of as a community of practice, where the students in the class co-evolve with the teacher (Lave & Wenger, 1991). The goal was to consider more thoroughly the aspects of classroom discourse in order to provide more insight into the role of teacher and student speech and behavior in the ESL classroom. The focus was to determine what part gesture plays in the mediation of teaching and learning in ESL classroom contexts. The following are the specific research questions as informed by a sociocultural theoretical perspective:

1. What patterns of gesture use does a post-secondary ESL instructor exhibit in the classroom to mediate learning?

2. How aware is this ESL instructor of the gestures she uses in the classroom? For example, does the instructor intentionally manipulate gestures in a specific way in the classroom? Does the instructor explicitly teach specific gestures? How does the instructor believe gesture mediates L2 learning?
3. How aware are students of the gesture use of their instructor? How do students feel about their instructor’s gesture use? Additionally, how aware are students of their own gesture use?

Pilot Study

To begin, a pilot study of the same nature as the current study was conducted in the spring of 2007. This research was extensively informed by that pilot study. This study was undertaken to partially remedy the problem that the gestural component of ESL instructors’ pedagogy requires further attention in the realm of second language acquisition research (Gullberg & McCafferty, 2008; Lazaraton, 2004; Lazaraton & Ishihara, 2005).

This study examined the lecture and conversational speech and corresponding gestures used in the classroom by three female instructors in a university setting while teaching ESL courses. Specifically, the observations were of the teachers in interaction with students concerning the subject matter. These instructors were video recorded.

Pilot Study Teacher Participants

For the pilot study project, three university ESL instructors were each observed for one class period of one hour and fifteen minutes. Two instructors were native English speakers, and one instructor was a non-native English speaker who was born in Italy although she moved to the United States at the age of six. All of the instructors were highly educated and had extensive language learning and international travel experience.

Pilot Study Student Participants

For the pilot study, students enrolled in the instructors’ individual English as a second language classes were also observed. A total of 53 students were observed in the three
classes during the spring 2007 semester. All of the student participants in this observation were not native to the United States and were from a total of nineteen countries: Japan, Korea, Lithuania, Moldova, Israel, Ethiopia, China, Russia, Germany, Cuba, Thailand, Taiwan, Mexico, Costa Rica, Brazil, Nicaragua, Jordan, Romania, and Peru. Since the teachers in all three classrooms led the class for almost the entire class period, the students did not exhibit gestures which could be considered rich data. Therefore, because the classroom culture was teacher-centered, the teachers alone were the focus of the research.

**Pilot Study Observations**

The first teacher observed gestured throughout the entire class even when she had objects in her hands. The instructor pointed to students with her index finger, her whole hand, or both hands. Interestingly, some deictics, iconics, and emblems were done with the left hand even though the teacher was right handed. Overall, the most frequent types of gesture were concrete pointing and beats. Metaphorics, iconics, and emblems were also used, but with less frequency.

The second instructor also exhibited many deictic and beat gestures. However, she did not point as often as the first instructor. In general, the second instructor did not gesture with the same frequency as the first instructor. As would be expected, this instructor gestured more when explaining a concept that was not explained in the book. In this lesson, as in the previous teacher’s lesson, the teacher spent a great deal of time speaking while looking at the overhead projector. Gestures were more prevalent when the instructor was not focused on the projector.
The third instructor was similar to the other instructors in that deictics and beats were the most frequent types of gesture. Another similarity was she often gestured with her left hand despite being right hand dominant. A difference was that deictics were not performed with the same frequency. This could be perhaps because a computer was used in place of an overhead projector. She did, however, point to the projection screen on a few occasions. Therefore, regarding concrete deictics and technology, when a teacher used an overhead projector, she pointed frequently to the image projected on the screen. This was not the case when one teacher used a computer to project the image onto a screen. Another difference of this instructor was that she performed gestures almost constantly when speaking. Of the three instructors, she gestured with the greatest frequency. A final difference was that her gestures were performed very quickly. This could be because her class was the most advanced regarding English level; however, this could also be due to the influence of her Italian culture on her gesture. Finally, this could also be merely idiosyncratic.

**Discussion of Pilot Study Data**

The pilot study project consisted of two main goals. The first goal was to observe teachers using gesture in the English as a second language classroom. Specifically, the objective was to observe any patterns that emerged from the data. Regarding the first of these goals, several patterns emerged as indicated above.

The pilot study data indicate that gestures are integral to the teaching practices of the individual instructors observed, and it was the intention of the present study to extend this research to more specifically examine the role of gestures in the contexts of teaching and learning.
Of note is the fact that the instructors in the pilot study were not consulted on their opinions of their use of gestures. The topic of the study remained undisclosed so that the instructors could be observed further in the future.

**Methods**

**Implementation**

Before conducting the research for the current study, approval was granted from the University of Nevada Las Vegas Institutional Review Board by the Social and Behavioral Sciences Committee. Approval was granted on October 8, 2009.

For this study, the teacher and student participants at a major southwestern university were observed in their natural classroom setting during scheduled English as a second language classes. Initially, an instructor teaching English as a second language for the university was contacted via e-mail to ask for willingness to participate in the study. Any instructor teaching English as a second language at the university was eligible for inclusion.

After the instructor indicated that she was willing to participate in the study, the instructor was given the instructor informed consent form in her mailbox on the university campus. After the instructor had an opportunity to read the consent form, she was given the opportunity to ask any questions about the research. The instructor participant was then comfortable with the research and signed the consent form, so a time was scheduled to administer the background survey and videotape the instructor teaching English as a second language lessons. Neither the teacher nor the students were asked to do any actions which were different from what would normally happen in the classroom. Furthermore, as indicated by Glesne (2004), “Reassuring participants that they cannot be
wrong is necessary” (p. 41), so the teacher and students were assured that the focus of the study was merely to observe second language teaching and learning.

In addition to the instructor being given the instructor informed consent form in her mailbox, student informed consent forms were given to the instructor's students to read in advance of the class observations so that the students had time to read the form before any actual observation occurred. Students were advised that they could ask any questions about the form and the research before the class observations. After the student participants had time to read the consent form, they were given the opportunity to ask the researcher any questions about the research.

If any student had not wished to participate in the study, he or she would have been asked to sit in a position on either side of the classroom so that they would have been out of view of the camera. However, all students consented to participation. If no students had wished to participate in the study, a different instructor would have been observed and videotaped.

The instructor and students were video recorded in the classroom for the first five weeks of an eight-week modular course, meeting twice per week for one hour. All class period observations² were viewed and analyzed according to any gesture patterns that were exhibited. The data were considered in their entirety.

After the observations, one instructor interview was conducted (see Appendix D for instructor interview questions). Additionally, student surveys were given to any willing students (see Appendix E for student survey questions). These actions were undertaken in order to understand the ways in which gestures are handled in the classroom. More detail

² One class period was a holiday, and for another class period, students went to the language laboratory; thus, over the five weeks, a total of eight class periods were recorded for this course, which met twice a week.
as to the nature of this interview, observations, and surveys, is given in the following sections.

Site of Research

The observations for the research took place in a university classroom. This was the choice of institution because the focus of the study was on post-secondary adult L2 learners, which was the population of interest. The participants were one post-secondary ESL instructor and 19 English language learners in a beginning-level pronunciation course.

Other potential research sites were small colleges and intensive English schools, but the university was chosen as the research site due to the desire to conduct the research in a university setting. This location was easily accessible because the researcher knew the director of the English as a second language department as well as some instructors. The instructor cooperation in this research was more easily obtained by conducting the study at the chosen university as opposed to the other schools in the area.

Participants and Selection

The particular groups of people eligible for observation in this study were instructors at the university and the students enrolled in their English as a second language courses. All of the student participants were not native to the United States, and they were all enrolled in at least one English as a second language course. More specific information regarding the teachers and students is below. The teacher’s and students’ consent was required to participate in the project, and consent was obtained prior to the research being conducted. All of the students in the teacher’s classroom consented to being observed.
**Teacher Participant.** For this research, one instructor was observed. This particular instructor had also been one of the participants in the pilot study (the first teacher discussed above). The particular group of people eligible to be observed were teachers contracted to teach English as a second language classes at the university. The instructor for the study was a part-time instructor for the university, assigned two courses to teach. The instructor was also a full-time high school teacher. The instructor was a native speaker of English who was born in Wisconsin. She also spoke Spanish and French as second languages. She earned a bachelor’s degree in Spanish and English secondary education at the University of Wisconsin. Furthermore, she earned a master’s degree in education and completed 32 credits after receiving her degree, earning a TESOL certificate and completing coursework in French and Japanese. The instructor also spent summers abroad in Mexico, Spain, and Costa Rica.

**Student Participants.** In the study, all of the students enrolled in the instructor’s individual English as a second language classes were also observed and videotaped. The student geographic makeup was four students from Mexico, three from South Korea, two each from Germany, Peru, and Russia, and one each from Argentina, China, Colombia, Cuba, Taiwan, and Turkey. Seven of the students were male and twelve were females (see Appendix B for a complete list of student country and gender). Two sets of students in the class were married couples. One couple was from Germany, and the other was from Korea. Often, at least one student was absent from class.

**Access**

As in the pilot study, the teacher and students were easily accessible because they were in classes at the university where the researcher knew department members. No
special arrangements needed to be made to observe the teacher and students, other than to gain approval from the university Office for the Protection of Research Subjects. Only the teacher’s and students’ consent was needed in the project, and all of the participants were given the informed consent forms required of study participants, as was the case in the pilot study.

**Risks and Benefits**

The risks for the teacher participant in this study were very limited. The only risk was that the teacher may have felt uncomfortable being videotaped while teaching a class. However, the teacher was asked prior to videotaping if she was willing to participate, and she had already willingly participated in the pilot study. Furthermore, the teacher was simply observed in her regular classroom while conducting usual activities. Neither the teacher, nor the students were asked to do anything special or out of the ordinary. The teacher did not suffer any substantial stress from the study. Student participants were also subjected to minimal risk when participating in this study. Students also had to consider the possibility of being uncomfortable while being videotaped, and other potential risks were that the students could have been embarrassed or nervous during the observations.

The instructor and students were videotaped as discreetly as possible, and the feelings of the participants were considered. The instructor and students had the opportunity to withdraw from the research at any time.

The potential benefits of the research greatly outweighed the potential risks. The benefits for the participants include the fact that, with the knowledge gained from this study, they can utilize valuable classroom time in ways most beneficial to them. The study can also benefit humankind because all teachers and students around the world can
learn from this research. If instructors of English as a second language can better understand the gestures they use, then students who are learning English as a second language will benefit as well.

Relevance

Several studies have revealed that the role of gesture is positive in relation to second language learning in the classroom (Allen, 1995, 2000; Chamberlin-Quinlisk, 2008; Faraco & Kida, 2008; Lazaraton, 2004; Lazaraton & Ishihara, 2005; McCafferty, 2002; Platt & Brooks, 2008; Sime, 2006, 2008; Tabensky, 2008).

Ethical and Political Consideration

One potential ethical issue that was taken into consideration was that due to the fact that students were from different backgrounds and cultures, they may have been accustomed to certain methods of instruction. In the current study, the opinions of all students were uniformly considered, and the goal was that all voices were heard equally in the surveys that were administered.

Another issue that could have emerged was that a senior instructor teaching at the university level may have been wary of a researcher examining the instructor while teaching. Some tensions could have arisen from another instructor conducting research that could potentially discredit another instructor’s teaching methodology. To address this issue, reassurance was given to the instructor during the research that the focus of the study was not to criticize or analyze, but merely to observe. The fact that all forms of instruction have merit was emphasized.
Data Collection

Focus. The initial primary focus of the observations was to view the gestures that the teacher used and analyze the patterns that emerged, using a sociocultural theoretical framework as indicated above to examine how gestures influence language learning and meaning making. Additionally, the initial focus was to view how the students reacted to the teacher’s gestures and note any patterns among the students such as the appropriation and internalization of gestures.

Role of the Researcher. For this project, according to Spradley’s (1980) definitions on the continuum from non-participant observer to full participant observer, as the researcher, I was an observer because the observations were conducted in a classroom of which I was not already a member. This role remained the same during the all of the observations. According to Glesne (2006), whose definitions are different from Spradley’s, on the participant observer continuum, I was a passive participant.

Person as Researcher. Researchers are frequently advised that it is extremely difficult to do research in one’s “backyard.” Despite the frequent claim that it is hard to see a culture from an outside perspective when it is a culture that a researcher is embedded in on a regular basis, I did not consciously experience this in the pilot study or study. My experience as an ESL instructor was helpful in my observations of the classroom.

Methods of Data Collection. The specific field methods used in the study in order to generate the data to answer the research questions included an instructor background questionnaire, three video cameras equipped with audio-recording devices, field notes, an informal, structured interview of the instructor, and written surveys of any willing student.
participants. Observations were general, and specific attention was paid to both the instructor and the students. These methods were similar to the methods used in the pilot study. Additional methods utilized included added comments written on the surveys by the study participants. The following table indicates the data sources for each research question.

Table 2

*Data Sources*

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<th>Research Question 1</th>
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<td>Observations</td>
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<td>Student Survey</td>
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<td>Teacher Interview</td>
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<td>Questionnaire</td>
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*Questionnaire.* In order to collect background information from the instructor, one short questionnaire (see Appendix C) with prepared questions was given to the instructor prior to the observations. This was given to the teacher via both e-mail and the instructor’s mailbox, and the instructor was asked to return the questions via either e-mail or hard copy. It was returned via hard copy with a curriculum vita sent via e-mail.

*Recordings.* For the observations, three video recording devices were used; one camera was digital and two used mini-DV tapes. Furthermore, artifacts found in the settings were considered. For the observations, the teacher and the consenting student participants were video recorded for entire class lessons. For the videotaping of the lessons, the three video cameras were set up before each class had begun. One video
camera was held by hand at the back of the classroom and focused on the teacher in order to videotape her gestures, and the other two cameras were placed at the front of the classroom on tripods and focused on the students. Brief field notes were taken before, during, and after the lessons. Because the classroom was shared with other university instructors, the video cameras were taken down after the class had ended and set up again prior to the next class. Finally, after the lessons had been videotaped, the gestures in the video were analyzed.

The sound quality obtained from the pilot study video was excellent in terms of teacher voice. For students’ voices, it was extremely difficult, if not impossible, to determine what they were saying. It was difficult to do so even when present in the classroom as these were English as a second language students who are not always confident in their speaking ability and do not always speak clearly. The first teacher who was observed in the pilot study even commented on three separate occasions in the course of the lesson that she could not hear the students when they were speaking and they needed to speak more loudly and more clearly. She devoted several minutes of the lesson to advise students on this matter. For the current study, this problem was addressed by obtaining video cameras specifically designed to exceptionally capture sound.

**Field Notes.** For these observations, field notes taken before and during the lessons were written onto paper. The notes taken during the class were minimal due to handheld videotaping during the observations. Immediately after the class observations, the notes were typed into a laptop computer and more detail was added to the notes. This was done because Spradley (1980) indicates that “if you decide not to take notes in the social situation you are observing, try to find a convenient place nearby where you can at least
make condensed notes *immediately following* each observation” (p. 69-70). Finally, field notes were coded by entering the data into tables. According to Marshall-Rossman (1999), “coding data is the formal representation of analytic thinking” (p. 155).

**Student Survey.** Follow-up surveys were given to willing students (see Appendix E). Students were expected to be eager to participate because many ESL students are interested in finding ways to interact with native English speakers. However, one concern was their low English ability. Four of the nineteen students returned the written surveys.

**Interview.** For the instructor follow-up interview, a short, individual, structured interview was conducted after the data collection and analysis (see Appendix D for planned interview questions; see Appendix H for transcript of the interview). In other words, this follow-up interview was conducted after the videos had been viewed and extensively analyzed. Even though the interview was structured, comments and open discussion were encouraged. The instructor was also shown portions of the video containing her gestures for member checking. The interview session with the instructor was digitally recorded.

**Reliability and Validity**

When conducting this research, it was absolutely necessary to engage in triangulation. In the current study, the various forms of data collection and analysis informed each other. Persistent observation was undertaken, an individual teacher interview was conducted, and individual student surveys were administered in order to address the issues of confirmability and credibility.

This is important because when conducting a focus group interview in another pilot study on homework grading methodology (Hudson, 2005), one student’s answer was
different when given in front of her peers. When she was asked the same question in a
follow-up interview, she indicated that she preferred for the teacher to take the homework
home to grade. However, initially, she stated a preference for going over work in class.
This discrepancy was surely a result of the peer pressure she felt from the rest of class,
most of whom indicated that they would rather review homework answers in class. To
avoid any problems of this nature, the current study also included methods for
triangulation such as conducting an interview and administering a survey in order to ask
the teacher and students about conclusions made about the gestures used.

In the gesture pilot study, any conclusions made from observing the video of the
instructors should have been checked by asking the instructors their views of what was
observed. However, because it was a pilot study, and the instructors may have been asked
to participate in further collection of data, the instructors were not consulted after the
observations. The focus of the study, as gesture-related, was not revealed, so that if future
observations were necessary, the teachers would not be aware of the subject of the study.
However, for the current research, the instructor was interviewed regarding her views of
the data observed.

**Data Analysis and Transcription Conventions**

The method employed in this study to represent gesture is termed second-line
transcript (Lazaraton, 2004), in which the nonverbal behavior is set off (by italics,
parentheses, etc.) from the verbal channel. All examples of the teacher’s gestures are
given according to the methods outlined by McNeill (1992) for gesture transcription.
Further conventions for transcription are adapted from Zhao (2008). The complete
conventions are listed in Appendix A.
Pseudonyms are used for all participants. The participating teacher is referred to as T. The participating students are referred to as Sa, Sb, Sc, etc. The class as a group is referred to as Ss. All gestures and speech are coded so that the results of the present study could easily be replicated.

**Cultural Domains and Taxonomic Analysis**

In the current research, cultural domains were identified according to the methods indicated by Spradley (1980). The domains were guided by *strict inclusion*. Furthermore, according to Spradley, “Like a cultural domain, a taxonomy is a set of categories organized on the basis of a single semantic relationship. The major difference between the two is that a taxonomy shows more of the relationships among the things inside the cultural domain” (p. 112).

**Theoretical Approach to Data Analysis**

The approach to the analysis of data was conducted within a sociocultural theoretical framework. The concepts of semiotic mediation, performance, activity theory, genetic domains, microgenesis, the zone of proximal development, internalization, materialization, thought and language, and regulation as they relate to the study are outlined below.

**Semiotic Mediation.** According to Vygotskian theory (1978), the mind mediates interaction with others through the use of tools and signs. In relation to the present study, language and gestures are considered as signs that play a role in the mediation of learning. Specifically, gesture is considered in relation to second language learning and teaching (Allen, 1995, 2000; Chamberlin-Quinlisk, 2008; Faraco & Kida, 2008; Lazaraton, 2004; Lazaraton & Ishihara, 2005; McCafferty, 2002; Platt & Brooks, 2008;
Sime, 2006, 2008; Tabensky, 2008). This study is presented from the perspective that the students in an English as a second language classroom are influenced by their cultural and historical contexts. For example, Gullberg (1998) found that the gesture types that the students exhibited were dependent upon culturally determined preferences for specific gesture types. In this study, it was the expectation that students’ use of gestures would be influenced by their cultures. For example, students from Latin American countries were expected to gesture more robustly, while students from Asian countries were expected to gesture in a more reserved manner. In other words, second language learners’ actions are considered according to the Vygotskian theory that culture and circumstances influence them.

**Performance.** In the present study, performance is viewed in the context of being a sign which is able to mediate the relationship between teacher and students (Newman & Holzman, 1993; Daniels, Cole, & Wertsch, 2007). Newman and Holzman (1993) state that “performance differs from acting in that it is the socialized activity of people self-consciously creating new roles out of what exists for a social performance” (p. 103). Performance is viewed as a way for the teacher to indicate what is significant.

**Activity Theory.** Activity theory (Luria, 1979; Wertsch, 1991; Lantolf, 2000; Lantolf & Pavlenko, 1995) was used as a foundation for viewing data in this study. As in the aforementioned studies (Coughlan & Duff, 1994; Brooks & Donato, 1994; Gillett, 1994; Thorne, 1999), motive was considered in order to determine activities based upon actions. Again, different students come from diverse cultural backgrounds and were expected to view tasks in different ways. Furthermore, Van Lier’s (1996, 2004) ecological notion of a classroom was used to frame the data.
Genetics and Development. This study was conducted following the genetic domains Vygotsky outlined to understand the higher functions of the human mind, considering genetic development in the ontogenetic domain (Lantolf, 2000). The focus was on the appropriation and integration of mediational tools and signs, such as language and gesture. In the current research, the appropriation of gesture by second language learners was considered in relation to this genetic domain. Specifically, the integration of gestures into classroom practices was examined. Also considered was the sociocultural domain, which addresses the effects of cultural artifacts such as words on thinking. Relevant here is the view that the mind is a functional system influenced electro-chemically by cultural artifacts, again with the focus on language (Luria, 1979, 1982).

Regarding the microgenetic domain (Luria, 1982; McNeill, 1992), which is concerned with the development of mediational forms focusing on a short period of time, another focus of the present study was language learning through microgenetic analysis. In order to determine whether the gestures used by the instructor lead to learning, an attempt was made to observe students’ appropriation of the gestures that the teacher used. In other words, the gestures that the teacher and students used were observed in order to determine whether they were using the same gestures. For instance, in the pilot study, one of the teachers used her index finger and thumb about two inches apart to represent a word, heading, or subheading. This would be one example of a gesture a student could appropriate. Both the idiosyncratic nature of gesture and the codified aspect of gesture are addressed. In this research, the view was that learning is a social practice where knowledge is co-constructed in development (Lave & Wenger, 1991).
The Zone of Proximal Development. Again, according to Vygotsky, development in the ZPD takes place during engagement in social behavior because those involved receive guidance from knowledgeable adults or peers. This collaborative learning is greater than that which can be attained individually. In this study, second language students were observed in social interaction with each other and with their instructor in the classroom. Data were considered in relation to the idea that participation leads to learning as in a community of practice (Lave & Wenger, 1991).

Internalization. In accordance with Vygotsky’s (1978) idea of internalization, where any learning is first viewed as occurring socially and is then possibly internalized, depending on the individual, the intention in this study was to observe these cultural forms of behavior. In the context of social interaction in the classroom, a second language student will initially view a gesture from an instructor as an external sign. This will then be transformed internally, depending on factors such as motivation and intention.

Materialization. Gal’perin’s (1989) view of the transition between material and ideal was also used to frame the study data in relation to non-native speakers of a language. In the ideal plane, words are images in the mind. In relation to gesture, this ideal plane is influenced by the material plane, which is activity in the physical world (see McCafferty, 2006, 2008a; Roth, 2002).

Thought and Language. In relation to Luria’s (1979, 1982) research indicating that a cultural activity such as schooling can alter thought, the intention in the present study was to consider data in relation to how second language learning in the classroom has the ability to alter thought. As in the previously mentioned thinking for speaking studies (Negueruela, Lantolf, Rehn, & Gelabert, 2004; McNeill & Duncan, 2000; Stam, 2006;
Yoshioka & Kellerman, 2006; Choi & Lantolf, 2008; Brown & Gullberg, 2008), attention was paid to gestures which could possibly exhibit the alteration of thought such as through the metaphoric gestures of the Japanese speaker in McCafferty’s (2008a) study where the student appropriated a Western metaphor for marriage.

One of Luria’s (1979) conclusions was that a direct result of schooling is a reformation of thought processes, and this was the view taken here. Of course, the data analysis considers how students see their own trajectories toward being members of the American community or not (see Rosa, 2007). This was specifically addressed in the student surveys, and the assumption was that the students who were motivated to be a part of American culture would exhibit evidence of the internalization North American ways of thinking and gesturing and be more successful in their L2 learning (see Gillette, 1994).

**Regulation.** The use of students’ language and gestures to mediate behavior was also examined in this study. The results of Luria’s (1979, 1982) studies indicate that language occupies an important role in mediating behavior. In Luria’s studies of children, they progressed from being object-regulated to other-regulated, and finally to self-regulated. In relation to second language learning, students follow the same path (McCafferty, 1994b). In this study, the role of embodiment in helping second language learners to accomplish tasks, gain self-regulation, and internalize language and gesture was considered (see Platt & Brooks, 2008). Within a sociocultural theoretical framework, the role of gestures for self-regulatory, intrapersonal functions was also considered (McCafferty, 2006).
These aspects of sociocultural theory in relation to second language learning are those that were considered in this study. This theoretical framework is well suited for qualitative research with this approach.
CHAPTER 4

FINDINGS

Research Questions

The data in this chapter are analyzed in relation to the following research questions:

1. What patterns of gesture use does a post-secondary ESL instructor exhibit in the classroom to mediate learning?

2. How aware is this ESL instructor of the gestures she uses in the classroom? For example, does the instructor intentionally manipulate gestures in a specific way in the classroom? Does the instructor explicitly teach specific gestures? How does the instructor believe gesture mediates L2 learning?

3. How aware are students of the gesture use of their instructor? How do students feel about their instructor’s gesture use? Additionally, how aware are students of their own gesture use?

Organization

This chapter begins with a description of the findings in relation to the instructor’s embodied practices. This includes a discussion of performance and foreigner talk as these concepts were found to be an overall feature of the data. A discussion of gesture timing is also included in this overview. This is followed by a quantitative analysis of gesture frequency. The data are then considered according to the following three linguistic categories which existed in the content of the classroom explanations: grammar, pronunciation, and lexis. For each of these discourse categories, other than grammar, a section is devoted to student use of the gestures observed in the classroom. Within these discourse categories, the instructor used several types of gestures in different frames of
classroom teaching and presentation, and these types of gestures are illustrated below. The functional uses of the gestures that the instructor displayed are also discussed. Gestures were also used as part of the management of the class, so a specific section is also devoted to the presentation of gestures related to classroom management. In addition, this chapter includes a discussion of the gesture use of students during the pair and group work observed in the course. Finally, the chapter ends with the findings of the written surveys given to the students in the course as well as a summary of the interview with the course instructor.

**Introduction**

**Performance**

To begin, the instructor’s gestures were often performed and included mimetic qualities. The depth of mimetic explanation was a salient factor in the data, and the instructor utilized both forms of mimesis, full-bodied and gestural mimesis. The data revealed that the instructor in this course both gestured and mimetically illustrated almost incessantly. In addition to exhibiting these mimetic gestures, pantomime was also an element of the instructor’s performance. At times, she pantomimed components of the language even though she was speaking.

The use of gesture in this study is performative due to the literalization that was demonstrated by the instructor through the use of gestures and full-bodied mimesis. The most prominent aspect of this study was the degree to which the instructor embodied the language as often as she possibly could through the use of gesture and mimesis. Thus, concretization was a core component of the data.
The results indicated a heightened sense of performance through the use of gesture when the instructor was introducing new material. For example, when she was teaching a new vocabulary word, an increase in the use of gesture accompanied the introduction of the word. This is a part of foreigner talk because the instructor was incorporating this into her pedagogy in order to make comprehension more readily accessible for the students who did not understand the language well. The data were also characterized by a heightened sense of gesture because gesture was used with no lexical items. She often replaced a lexical item with gesture, only exhibiting gesture. The data were characterized by different levels of foreigner talk and the use of gesture. The instructor used gesture when she was speaking, and she used gesture by itself.

**Foreigner Talk**

The instructor’s speech in this study was also generally characterized by some features of foreigner talk (Hock & Joseph, 1996). However, it is first necessary to note that several aspects of the instructor’s speech were contradictory to Hock and Joseph’s (1996) definition of foreigner talk. For example, the instructor’s use of foreigner talk did not include an increase in volume, nor did it include simplification or attrition of lexical items such as articles and conjunctions. A “chunky word-by-word delivery” was also not a characteristic of the foreigner talk observed in this particular classroom (Hock & Joseph, 1996, p. 421). An increased use of colloquial expressions was also not a feature of the data. In relation to syntax, the instructor’s speech was not characterized by an absence of relative clauses or other dependent clauses. Also contrary to Hock and Joseph’s definition was that inflection was not omitted. In fact, inflection was emphasized.
Despite these contradictions, in accordance with Hock and Joseph’s (1996) definition of foreigner talk, the instructor did exhibit a decrease in speed and did include a use of onomatopoeia. Specifically, the analysis of the data revealed that the instructor’s foreigner talk was primarily characterized by over-enunciation and lengthening of speech components. These qualities of speech were observed throughout the course recordings.

As an example of foreigner talk with regard to timing, in the following example, the length of speech components is much longer than those a native speaker would use to say the word *Wednesday*. The figures clearly show the movement of the instructor’s head while saying the word.

*Figure 2. Example from Class 3 at 14:12  Figure 3. Example from Class 3 at 14:12*

T: When you are <> giving us <> your first speech, <> which is going to be <>

*Wednesday.*

[no gesture]

The following is another example of foreigner talk with regard to enunciation. When the instructor said *numbers* in this example, she said the word very slowly, over-enunciating every sound. This is clearly visible in the following frames.
In the data, many instances of foreigner talk were found, both with and without gesture. The above examples of foreigner talk are those which did not include gesture. The following section includes a discussion of the gestures that accompanied the instructor’s use of foreigner talk.

**Foreigner Talk with Gestures**

Similar to Adam’s (1998) study of gestures in relation to foreigner talk, the instructor in the current study relied heavily on deictics and iconics in addition to pantomime, metaphorics, and emblems in an effort to increase comprehension. While the instructor exhibited exaggerated gestures when producing normal speech, she also produced gestures to accompany speech that had the qualities of foreigner talk. The following example demonstrates the instructor’s use of foreigner talk accompanied by gesture, not simply foreigner talk. The example also demonstrates the performative element of the instructor’s lessons.
In the following example, the instructor included gestures for many of the words that she stated. Specifically, this is an example showing the instructor performing the act of writing as she was explaining to the students that she wanted them to use standard American letters in their writing. From the character viewpoint, she utilized iconic gestures to mimic the act of writing. Thus, this example includes an element of pantomime even though she was speaking. It is also an illustration of the instructor’s use of foreigner talk with gestures as an element of her performance.

Example from Class 1 at 56:06

T: I still want you to be able to form standard letters,

[RH index finger and thumb trace a letter in the air] letters.

[RH index finger touches LH fingers] so that when you’re writing

[RHF with thumb points toward textbook] that everybody

[LPOD crosses over RPOD and then BH extend outward with palms down] understands

[holds end of previous gesture] the wonderful

[BH beat] things

[RH index finger touches LH fingers] that you have in your head.
[RH index finger points to right side of head while LH index finger points to left side of head]

What happens

[LH index finger and thumb connect at chest level]

if you don’t write well,

[RH index finger and thumb connect as if holding a pencil with LPOU as if paper]

even though you are thinking

[RH ring finger points to right side of head while LH ring finger points to left side of head]

and the things that you know,

[two small beats with BH]

Figure 6. Example from Class 1 at 56:21

people don’t understand

[RH index finger connects to RH thumb as if holding a pen and writing on LHOU]

maybe your writing.

[RH index finger touches LHOU]
From the character point of view, the instructor produced many gestures such as these to indicate writing throughout the course. This was a very common gesture that she exhibited. Overall, the above example illustrates both the instructor’s performance and use of foreigner talk accompanied by gestures in the classroom.

This example exemplifies the main element of the findings which was the interconnection between performance and foreigner talk. In addition, iconic gestures were an element of foreigner talk and were also performative. An overall characteristic of the data was that the instructor was over-acting in addition to over-enunciating. Thus, foreigner talk was observed to be part of performance. Foreigner talk is by its very nature an element of performance because it is not text based in the same way that correct use of grammar is. So, instead of omitting grammatical elements and speaking loudly, the instructor over-emphasized elements that she believed would lead to comprehension, and foreigner talk is based on comprehension.

**Gesture Timing**

**Checking for Understanding.** In addition to performance and foreigner talk being overall components of the data, a very important pattern that was noted throughout the course recordings was that the instructor exhibited perfect timing of her gesture when she wanted to give the students clues to help them with comprehension of a particular point; however, when she wanted to check the students’ understanding, she completely stopped her gesturing. This pattern was extremely well coordinated. For example, after the instructor explained the difference between the long and short vowel sound of /iː/ as in ‘eat’ versus ‘see,’ she said these words and asked the students to indicate which words contained a long vowel by raising their hands. When giving the examples of these two
words to the students, the instructor held her hands down at the level of her stomach and did not move her hands at all (Figure 7). She only gestured when she wanted to show the students that she wanted them to raise their hands to indicate which word they would choose (Figure 8).

*Figure 7. Example from Class 2 at 5:52*

T: Example: Eat.

Students: Eat

T: See.

Students: See.

*no gesture*
T: If you hear it longer, I want you to show me which one.

[RHF with thumb up]

<gesture to indicate how she wanted the students to show her>

The instructor deliberately manipulated her use of gesture when she wanted to check for understanding.

**Gesture and Speech.** While gesture is generally produced in synchronicity with speech, the instructor in this study also demonstrated a specialized use of timing in this regard. She produced gesture immediately as an answer to students’ questions. Her timing of gesture was more pedagogically oriented than the typical timing of speech and gesture. In other words, she changed the timing of the gestures she produced, deliberately functioning on a pedagogical level with regard to timing. In normal conversation, gesture typically accompanies words automatically, and the gesture mirrors speech. However, the instructor exhibited a specialized timing of gesture when she was interacting with students. She had a very deliberate use of gesture in relation to interaction with the students in the classroom, and it was pedagogical. In addition, in some instances, she stopped speaking in order to illustrate what she was talking about through gesture.
As indicated above, performance and certain aspects of foreigner talk accompanied by gesture were present throughout the course recordings. In addition, the instructor demonstrated specialized use of timing. The following section describes a randomly chosen five-minute segment of the recordings in its entirety and is illustrative of the elements of performance and foreigner talk that were present throughout the data.

**Gesture Frequency**

The following is an attempt to catalog some of the gestures used in the post-secondary ESL classroom with some examples of each. In order to present an estimate of how frequently gestures were exhibited in the classroom, a five-minute sample from the data was randomly selected from the eight hours of video recording of the instructor.

The purpose of this segment is to present a component of the course quantitatively, using descriptive statistics. This is included in order to provide the reader with a sense of the overwhelming presence of gesture in the classroom. This random five minutes is evidence of the gesturing that occurred. The following is a description of the segment followed by how many gestures and how many different kinds of gestures were exhibited. It is important to note that the instructor was behind the podium during this segment since the nature of the gestures presented during the course varied greatly, depending on whether she was in front of or behind the podium.

The sample begins in class eight, which was the last class that was recorded during the fifth week of the eight-week class. The segment begins 26 minutes and 18 seconds into the recording of that class. The transcription of the segment is presented in Appendix G.
In the beginning of this segment, the instructor was behind the podium, reading words in the text and having the students repeat after her. She then readied a listening clip on the computer in preparation for having the students complete a listening activity. However, as she was doing so, a student indicated that he had a question, and she stopped the listening to answer his question. The student asked how to pronounce the word *careful*. The instructor then used a gesture to explain the lexical meaning of the word. She raised her left hand and shook her index finger back and forth (at 27:23). This gesture lasted two seconds.

The instructor spent the next two minutes exhibiting many concrete deictics, pointing to the book. At 28:56, she clapped her hands to indicate the number of syllables in the word *dangerous*. At 29:03, she raised her right hand to chest level with a pen in her hand to ask the class if they knew the meaning of the word *dangerous*. This gesture again lasted two seconds.

At 29:12, she walked from behind the podium to stand in front of another student, Sl, who asked another question. As she was walking toward the student, she raised both her hands to the level of her stomach as she began to repeat the student’s question. This gesture by the instructor mirrored the gesture that the student was making as she asked the question. This can be seen in the following figure.
**Figure 9.** Example from Class 8 at 29:15

Sl: How is the difference…?

* [BH raised with palms facing outward; RH holding pencil]  

T: What is the difference between…

* [raises BH up with palms facing outward, mirroring the student’s gesture]  

*<instructor walks toward the student from behind the podium>*

After the student asked the question, the instructor returned to her space behind the podium to explain the answer (at 29:25). In the remaining two minutes of the clip, the instructor explained the difference in pronunciation between the words *lettuce* and *letter*, explaining *schwa* and how an intervocalic letter *t*, as in *later*, is pronounced as /d/ in North American English.

The description of this clip ends 31 minutes and 18 seconds into the recording, which is exactly five minutes after the randomly selected start time of the segment.

The following table indicates how many times individual gestures occurred for the random sample chosen. The table is not meant to represent a representative sample of the frequency of gestures used in the five-week period that the classroom was observed. This table is merely intended as an indication of how a randomly selected sample of time in
this classroom appeared. This is meant to be a characterization of the instructor interacting with students, including communicative interfacing with students.

Table 3

*Frequency of Instructor Gestures during a Five-Minute Random Sample*

<table>
<thead>
<tr>
<th>Gesture Function</th>
<th>Number of Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>gestures to explain grammar</td>
<td>0</td>
</tr>
<tr>
<td>gestures in the form of a phonetic symbol</td>
<td>1</td>
</tr>
<tr>
<td>gestures to indicate prosodic features</td>
<td>1</td>
</tr>
<tr>
<td>clapping to indicate syllabification</td>
<td>1 word; two claps</td>
</tr>
<tr>
<td>abstract pointing</td>
<td>2</td>
</tr>
<tr>
<td>pointing to a word in the text without writing a particular notation</td>
<td>20</td>
</tr>
<tr>
<td>pointing to a word in the text and writing a notation such as a phonetic symbol or circling a word or part of a word</td>
<td>10</td>
</tr>
<tr>
<td>gestures to explain lexical meaning</td>
<td>2</td>
</tr>
<tr>
<td>gestures that mirrored a student’s gesture</td>
<td>1</td>
</tr>
<tr>
<td>gestures that did not necessarily have a pedagogical function</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>

Due to the fact that this particular clip was randomly chosen, it is representative of the gestures the instructor used when she was behind the podium focusing on the text as opposed to in front of the podium. Again, it should be noted that the results of this segment are different from what would be expected if the instructor had been in front of the podium in a different, randomly selected segment of class time.

To begin, the most common type of gestures exhibited were concrete deictics. This is to be expected since the instructor was behind the podium to explain content in the book and have the students repeat words in the book after her. In addition, several gestures were a combination of pointing to a word in the text with a pen or pencil while making different types of notations on, above, or below the word. For example, the instructor
circled words, syllables, and letters. She also wrote phonetic symbols above or below words. In addition, she wrote accent marks above words and syllables. This occurred ten times in five minutes. In addition, the instructor used her pen or pencil to point to words without marking the text at all. Furthermore, the instructor often pointed to words in the text with her index finger when she was not holding a pen or pencil. This occurred 20 times and was the most frequent type of gesture exhibited in this particular segment behind the podium. Interestingly, the instructor used both her left and right hand to point.

In this clip, the instructor devoted more attention to concrete deictics in reference to words in the text when she was explaining phonetics and phonology, spending more time emphasizing these kinds of explanations. In other words, the majority of time was spent signifying the importance she saw of referring to those words in the text.

No grammar was explained in this particular clip since the emphasis was on pronunciation of specific words in the text. However, this gesture function was a component of the overall classroom data and is discussed in this chapter, so it has been included in the table even though none were found.

Only one gesture in this particular segment was in the form of a phonetic symbol. It was in reference to the schwa, which is a vowel sound. This is similar to the phonetic symbol gesturing that the instructor exhibited in previous class sessions.

The instructor gestured once to indicate prosodic features, incorporating movement of her head and shrugging her shoulders along with the gesture of turning her right hand palm up (the textbook was in her left hand). Immediately preceding this, although she did not include a hand gesture, the instructor also used her head to indicate prosody of the schwa sound.
When the instructor was explaining the pronunciation of the word *dangerous*, she clapped twice to indicate the syllabification of the two syllables in the word *danger*. In place of clapping, she pointed to -*ous* in the text with the pen in her right hand and wrote the symbol for the schwa sound in the text. This was projected onto the screen by the document camera.

The instructor exhibited abstract deictics twice in this particular segment. They were presented immediately after each other. The first of these was when she used her right hand with her palm open to point to her head in order to indicate that she did not know whether the students’ knowing a linguistic term was helpful to them. In addition, she then used her right hand and tapped on her ear three times. The purpose of this gesture was to indicate to the students that when she says something such as a linguistic term, the students hear it and can presumably learn pronunciation.

A total of two gestures were used with speech to explain lexical meaning. The gestures were for the words *careful* and *dangerous*. To explain *careful*, the instructor raised her left hand pointing and shaking her index finger. With *dangerous*, the instructor displayed a similar gesture, raising her right hand with a pen in it and pointing the pen up.

In this particular segment, there was one instance where the instructor mirrored a student’s gesture. When the student asked a question, the instructor repeated the question back to the student, gesturing in exactly the same way as the student. The instructor was standing directly in front of the student when she did this.

Finally, some gestures that the instructor exhibited in the five weeks of classroom observation were gestures that did not necessarily have anything to do with the pedagogical aspect of the classroom. In this particular segment, one gesture fell into this
category. The instructor performed the gesture with her left hand at hip level when she was behind the podium, so the assumption is that it was not intended as a gesture for the students to see.

Figure 10. Example from Class 8 at 30:15

T: Now that you brought that up…

[points LH index finger and moves it in upward at hip level]

As an approximation, however, the overall amount of time spent in this segment on gestures that were located in a pedagogical frame was 97%. The instructor exhibited 39 gestures in this five-minute segment with only one gesture that appeared to be unrelated to pedagogy. This does not include adaptors, which are gestures that the instructor exhibited that did not have a communicative intent. An example of this would be the instructor pushing up her glasses.

In this sample, the focus was not to look for anything in particular. This is merely a complete relation of what was found within a completely randomly chosen five minutes of recording. This section of video was rich in gesture use because of the instructor’s teaching practices and the manner in which she runs a classroom. This component of the
The data has many pedagogical implications. The segment provides an indication of the frequency of gestures and is meant to be an example of what happened in the classroom.

The following sections describe gesture patterns that were observed in the data as a whole. From the data, it appears that the instructor viewed the language as something to be illustrated as concretely as she could through gesture. The organization into different linguistic categories reinforces the notion that the instructor was trying to concretize the language and codify it. Gestures in this study were considered in relation to pedagogy. Therefore, not only the gesture types, but also the pedagogical functions, are discussed.

**Grammar**

The observed course was a pronunciation course, not a grammar course, so the gestures related to grammar were only a small component of the data. Nevertheless, these gestures consist of an important part of the range of gestures observed in the course recordings. These gestures related to grammar are organized according to the categories of deictic and iconic gestures. A section on dance is also included.

**Deictic Gestures and Verb Tense**

**Past Tense.** The instructor exhibited many gestures in an effort to explain the grammatical concept of verb tense, specifically the simple past tense. For example, in an effort to describe the past tense, the instructor frequently used abstract deictic gestures to point to the past as if it were located behind her, often pointing with her thumb. The instructor also pointed to the ground to indicate the present time. These are abstract, as opposed to concrete, deictic gestures.

In the following example, the instructor was explaining to the students that when they were giving speeches about a vacation, the verbs used had to be in the past tense. In the
following frames depicting this example, the instructor not only pointed behind her, but also emphasized her point by taking a step backward at the same time as if moving into the past. In reference to her hands, she specifically lifted her left hand to point behind her with her thumb. In the following example, the instructor moved from a position next to the students’ table to a position in front of the students’ table. In this example, and in this portion of the lesson, the instructor was referring to simple past tense. This example illustrates the physicality of the pedagogical mode that she was in, and this was typically used as an aspect of her teaching.

![Image](image.png)

*Figure 11. Example from Class 3 at 14:44*

T: Past.

*[used LHF with thumb to point behind her]*

*stepped backward with left foot and then right foot as she gestured with her hand>*

The instructor repeated this gesture many times. In the following example, which is a continuation of the above, the instructor dropped her hands and then once again used her left hand to gesture behind her referring to the past. However, the instructor gestured with her palm open and down as opposed to with her fist as in the previous example.
Figure 12. Example from Class 3 at 14:47

T: I would like you to talk about a past vacation.

[used LH thumb with palm open to point behind her]

The instructor produced the same gesture with movement in the following example, pointing to the past with her left thumb and stepping backward at the same time. Again, she took a very large step backward, clearly changing her place in the classroom.

Example from Class 3 13:36

T: What if it’s past tense? Teacher what?

[used LHF with thumb extended to point behind her]

<teacher stepped backward with left foot and then right foot as she gestured with her hand>

The instructor also stepped backward in Class 7 to indicate past tense when she was discussing speeches which would be used as the final examination. In this example, she did not specifically point behind her, but she did use her whole hand to gesture as she stepped backward.

Example from Class 7 16:38

T: You’re going to be focusing on some of your…
[beats with LH fingers closed]
past tense…

[LHPU moves from the front of her body to the left]

*stepped backward with left foot and then right foot>*

and again your feeling words.

*uses RH index finger to count on LH fingers beginning with thumb*

The instructor repeated this gesture several times in this class as indicated by the following examples. In addition, she sometimes produced the gesture without the body movement, and she sometimes produced the body movement without producing the gesture.

The following serves as yet another example of the instructor exhibiting an abstract deictic gesture, referring to the past as behind her. In this example, she does not step backward.

Example from Class 3 at 15:11

T: I went there. Notice the

*used LH index finger to point upward*

past tense.

*used thumb of LHF to point behind her*

Again, in this example, the instructor used a deictic gesture with the clear abstract function of explaining the grammatical concept of verb tense.

When the instructor had a book and pencil in her hand later in the same class, she stepped backward without using the gesture. She was asking about the simple past tense of the verb *say*. 
Example from Class 3 at 47:39

T: Say in the past tense is…?

[no gesture]

<stepped backward with left foot and then right foot; holding book in LH and pencil in RH>

In the fifth class of the course, the instructor again reproduced this backward movement again when discussing the past tense of the verb lay. She incorporated gestures when laying an eraser on a student table. However, she did not point behind her.

Example from Class 5 at 11:00

T: I lay it here, or I

[RH lays eraser on the table]

past tense,

<stepped backward with left foot and then right foot>

I laid it.

[RPO gestures toward eraser]

I laid

[RPO gestures toward eraser]

the eraser on the table.

[RH picks up eraser]

Laid.

[RH lays eraser on the table]

Even when the instructor was not specifically describing the past in relation to the grammatical concept of verb tense, she still used this gesture combined with stepping
backward to indicate the past. In the following example, she did this when talking about
two days in the future, using the gesture and stepping movement to indicate which day
would precede the other.

Example from Class 3 at 06:24

T: You can pay up until the Friday

[moved LH index finger from the front of her chest to point behind her]

before class.

[returns LH index finger to left front of her chest]

<stepped backward with left foot and then right foot as she gestured with her hand>

In the above example, the instructor used her index finger as opposed to her thumb,
which she had used in previous examples where she was specifically referring to verb
tense.

The instructor even produced this gesture when talking about her grandmother as a
form of self-disclosure.

Example from Class 4 at 53:29

T: Maybe my grandmother

[LH thumb points behind her]

said trousers.

[holds gesture]

**Present Tense.** Continuing the above explanation, the instructor took a step
backward when mentioning her grandmother again a minute later. Then to summarize,
she said trousers from where she was standing, took a step forward and said slacks to
indicate that it was a more modern, increasingly used word, and then took another step forward when saying *pants* while pointing to the ground to indicate the present time.

Example from Class 4 at 54:16

T: When *maybe*

*moves LHPO to chest*

in *when* I was in high school, we probably said slacks.

*fingertips of LHPO tap chest twice*

When my grandmother was in high school,

*LH elbow remains bent with hand up, fingers closed*

<stepped backward, leading with left foot>*

trousers.*

*opens LH and LHPO and moves back with palm facing the class*

Trousers.

*LHPO moves back again; palm facing the class*

<remains in place>*

slacks

*LHPO moves forward in front of and perpendicular to the front of her body*

<stepped forward, leading with right foot>*

pants.

*LH index finger points to ground*

<stepped forward, leading with left foot>*

Therefore, in the above example, the instructor was not only stepping backward to indicate the past, but also stepping forward to indicate movement in time. With regard to
her hand gestures, she pointed behind her to indicate the past and pointed down to the ground to indicate the present tense. Note that in this example, the instructor used a reflexive gesture when she said, “When I was in high school...”

Additionally, in another class, the instructor pointed down with a marker to indicate the present tense.

Example from Class 7 at 15:31
T: It could be someone who is still living.
[LH points with marker to the ground, moving hand up and down]

Finally, when the instructor was describing the difference in meaning between the ages fifteen and fifty, she moved her hand forward to indicate fifteen and pointed behind her to indicate fifty.

Example from Class 3 at 23:21
T: Fifteen is teenager.
[RHP stretches forward]
Fifty
[used LH thumb, with fingers closed, to point behind her]
is
[beat]
my age.
[used fingers of LPO to touch chest]

In addition to using a combination of pointing and stepping backward to refer to the past tense, the instructor stepped forward and pointed to the ground to refer to present time. Finally, she also pointed forward to indicate a younger age.
Iconic Gesture and Prepositions

In the following example, by walking, the instructor was using her physical orientation toward the students to illustrate the idea of ‘to.’ She walked forward while simultaneously saying, “I went to the beach,” using her physical orientation as an illustration of the meaning of the sentence. In this example, the instructor was using the character point of view to illustrate past tense. Inadvertently, however, she illustrated the prepositional phrase “to the beach.”

Figure 13. Example from Class 3 at 15:39

T: I went to the beach.

[swings arms]

<walks forward>

Dance

In the following example where the instructor was explaining the past tense, she appeared to be dancing because she bobbed her head and bent her knees as she pointed with her left hand for emphasis. All of this happened as she said the word told. The point
of the lesson was to explain the use of simple past tense. In the figure, the instructor’s head is bent down, and her knees are bent.

*Figure 14. Example from Class 3 at 13:38*


*used LH index finger to point*

<emphasized the word told while bending her knees and moving her head forward and down>*

During this portion of the class where the instructor was explaining past tense, she also stomped her foot to indicate present tense. This is shown in the following example.

Example from Class 3 at 12:51

T: Be. Present **<___>** is…

*stomped left foot once>*

In this segment of the class, the instructor also bobbed her head when explaining the past tense of the verb *be*. This is shown in the following example.

Example from Class 3 at 13:15

T: Example. If I have I
<turned around to face class>

<.> was…

[lifted head up and then quickly down to emphasize verb]

<turned around to face class>

This segment contained many examples of the instructor moving her head and body while explaining verb tense.

**Summary of Gestures Related to Grammar**

The above examples exhibit some of the instructor’s gestures while describing the grammatical concepts of verb tense and prepositions. The following table indicates a summary of the types of gestures used for this purpose.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Type of Gesture</th>
<th>Specific Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar</td>
<td>deictics</td>
<td>past tense</td>
</tr>
<tr>
<td></td>
<td>iconic from character viewpoint</td>
<td>preposition</td>
</tr>
<tr>
<td></td>
<td>dance</td>
<td>past tense</td>
</tr>
</tbody>
</table>

Table 4

*Data Display of Gestures Related to Grammar Explanations*

The following section provides examples of some of the gestures the instructor used while describing the concepts of phonetics and phonology.

**Pronunciation Explanation**

In addition to supplementing grammar explanations with gestures, the instructor presented several gestures to explain phonetics and phonology. The following gestures
are organized according to phonetic symbols, voiced sounds, vowel length, mouth shape, syllable stress, syllabification, intonation, and prosody.

**Iconic Gestures and Phonetic Symbols**

Many of the gestures the instructor exhibited would not necessarily be understood outside of the context of the classroom because they were gestures specifically related to phonetic symbols. In the following example, the instructor was explaining to the students on the first day of class that they should learn phonetic symbols for pronunciation so that when she gestured in the form of a phonetic symbol, the students would understand what she meant.

*Figure 15. Example from Class 1 at 45:18*

T: Study those, know those, so when I am showing you in writing, and doing *that*, you understand what sound I mean.

*[RH index finger and thumb in c shape]*

The instructor produced this gesture several times more in this class and repeatedly throughout the observations of the course. For example, in the third class of the course, the instructor presented the above phonetic gesture again when she was teaching the
sound. The instructor presented this gesture to indicate the phonetic symbol for the vowel sound in the word *taught*, /ɔ/. The instructor rotated her hand and body 180 degrees as she repeated the word *taught*.

![Figure 16. Example from Class 3 at 14:02](image1)
![Figure 17. Example from Class 3 at 14:04](image2)


*RH index finger and thumb in c shape, moving from right to left*

The instructor repeated this gesture several times throughout the recordings.

In addition, the instructor used this gesture when explaining the diphthong in the word *boy*, /ɔɪ/. Example from Class 1 at 43:42

T: The next one is /ɔɪ/. /ɔɪ/ is gonna be that

*Pencil in RH points to symbol in textbook which is on document camera* backwards c again

*RH index finger and thumb produce c-shaped gesture*

with a y.

*Holds previous gesture*
Another example of a pronunciation symbol that the instructor exhibited through gesture was the horizontal line which is written above letters to distinguish long vowel sounds. In the following example, the instructor drew an imaginary horizontal line with her finger in the air, to indicate that the letter $a$ in *late* is a long vowel, written as $\ddot{a}$. After drawing the imaginary horizontal line, she moved her finger back to the beginning of where she had started the line and drew the line again, therefore, drawing the line in the air twice.

*Figure 18. Example from Class 4 at 18:20*

T: Why <…>

<leans forward>

that $a$ is pronounced /eɪ/ is because it has the silent e at the end.

*draws horizontal line with RH index finger, tracing back to repeat line*

The following is an example of a gesture used for the pronunciation symbol for the sound /ʌ/ as in *but*. The instructor presented this sound many times in the observed portion of the course, but this gesture was not produced until Class 7. She had previously used a gesture in the shape of the letter $u$, as described below.
Figure 19. Example from Class 7 at 23:05

T: That’s a lot with that /ʌ/ sound.

[Fingertips of both index fingers touch at level of chin to produce upside down v shape; instructor slightly shakes her hands and arms as she is producing this gesture]

An example of the other gesture that the instructor had previously used to represent this sound occurred in the fourth class when the instructor was explaining how to pronounce the word *mustache*. It is important to note that the instructor stood on the tips of her toes as she produced this sound.

Figure 20. Example from Class 4 at 47:31
T: We’re gonna say /ʌ/

[LH index finger and thumb move to about an inch apart at chest level]

<stands on the tips of her toes as she says /ʌ/>

mustache.

[LH index finger and thumb move to about an inch apart at face level and move up and down twice]

The instructor repeated this u-shaped gesture several times in the recordings.

Finally, with regard to gesture in reference to the pronunciation of specific sounds, the instructor also gestured in the shape of the letter o during the first class at 37:45. Though this is not the phonetic symbol for this sound, this was an effort on the part of the instructor to teach the students how to pronounce this specific sound. She did this to indicate to the students that when they were saying words such as sailor, she did not want their pronunciation to include the sound /ɔr/, as in for; she wanted them to say /әr/.

**Haptic Gestures and Voice**

Other examples of gestures that would not necessarily be understood outside the classroom context include instances where the instructor incorporated a haptic element, touching her throat or teeth, when explaining certain sounds. For example, multiple times, when explaining voiced sounds, as opposed to voiceless sounds, the instructor touched her throat, indicating that certain sounds produced in the English language cause vocal cords to vibrate, and this vibration can be felt.

In the first class, the instructor touched her throat to indicate to the students that some sounds cause the muscles in the throat to be tight or tense as opposed to relaxed.

Example from Class 1 at 53:15
T: Your muscles should feel tight or tense.

[beats with LH bent at elbow with hand up]

Ooh, ooh, ooh, ooh.

[LH touches throat]

In the following example, the instructor said the word voice and touched her throat two different times within a few seconds, even quickly tapping her throat each time she touched it. Upon examination of the timing of when she said the word voice and her hand touched her throat, her hand moved toward her throat before she said the word voice in anticipation of the gesture, and her hand touched her throat just before she said the word voice.

T: It has to do with the voice.

[RH taps throat three times in rapid succession]

Figure 21. Example from Class 2 at 6:58

if it has a voiced sound.

[RH taps throat three times in rapid succession]
In the following example, the instructor used the index fingers of both of her hands to touch her throat while leaning forward and tilting her head back to clearly expose her neck.

*Figure 22. Example from Class 2 at 10:45*

T: So, when it’s voiced,

[Index fingers of both hands touch throat]

She also leans forward and tilts head back to expose neck.>

These gestures incorporated a haptic element in addition to a deictic element because she was also touching and tapping her throat and teeth. The instructor touched her teeth, mouth, and throat very often throughout the entire observed five weeks of the course to illustrate how sounds are pronounced.

**Metaphoric Gestures and Vowel Length**

Other examples of metaphoric gestures that the instructor produced are those indicating the “length” of sound as in the following example. To complete the gesture
above, the instructor extended both hands in front of her in an attempt to indicate the length of vowel sounds in a metaphoric gesture.

*Figure 23. Example from Class 2 at 10:46*

T: it’s long.

*extends both arms forward to emphasize that these voiced vowel sounds have duration*

In another example of a gesture related to vowel length, both hands begin directly in front of the mouth. Then they move outward to illustrate the idea that one form of the /iy/ sound (presented as /iy/ in the course textbook) is spoken for a longer duration. Neither sound nor time can be measured with a ruler, but the instructor indicated, exaggeratingly, the length of sound with her hands. This is a metaphorical mapping of time onto space.
Figure 24. Example from Class 2 at 8:43

Listening on CD (male voice): “The sound /ɪː/ is very long in these words.”

T: tea

[BH move horizontally outward at the same time, indicating the “length” of the sound /ɪː/ in tea]

The instructor repeated this gesture several times throughout the lesson (this also occurred at 8:50, 9:37, and 10:29) and in other instances in the course recordings. The following figures show a smaller version of this gesture.

T: In English, there are variations of it <teacher is referring to the /ɪː/ sound>,

[LH is at chest level; moves RH up and rotates LH in front of it; then rotates RH in front of LH; then rotates LH in front of RH again]
and one is going to be longer.

[BH with fingers closed begin at the mouth and extend outward]

In the following example, the teacher exhibits the same gesture when she is behind the podium.

Listening on CD (female voice): “See.”

T: See.

[BH, with fingers closed, begin at chest and move outward]
In the fifth class that was observed, the instructor exhibited this gesture 13 times in the span of two minutes when she was explaining lengthening of words such as *no* for emphasis. In addition, during this two-minute segment, she used one arm extended three times and her hand once to explain this lengthening. This was in addition to the use of her body to emphasize this; she leaned forward and to the side multiple times, swaying her hips as well.

In contrast, the following are examples of gestures the instructor used to indicate “short” vowel sounds. To produce these gestures, the instructor put her hands and fingers together. The following gestures were completed in succession, one immediately after the other one to indicate the short vowel sound in the word *meat*.

*Figure 28. Example from Class 2 at 9:10*

Listening on CD (male voice): Meat.

T: *Meat.*

[thumbs and index fingers of BH touch]
Figure 29. Example from Class 2 at 9:11

T: <…>

[thumbs and tips of fingers of LPO and RPO touch at chest level]

<this is a second gesture without speech to emphasize the ‘short’ vowel sound in the word meat>

The following is another gesture that the instructor used to indicate “short” vowel sounds. This was before a listening exercise on the schwa sound, /ə/.

Figure 30. Example from Class 7 at 27:54

T: See. It’s not like uuuuuuuup,
[RPOU lifts from chest level to slightly above head]

it’s /ə/.

[RH index finger and thumb slightly apart at level of mouth]

The instructor also clapped when speaking to indicate short vowel sounds. She clapped five times in two minutes in the fifth class. This occurred from 5:16 to 7:16.

**Iconic Gestures and Mouth Shape**

The instructor exhibited other gestures related to pronunciation in order to demonstrate to students the correct shape of their mouths when saying certain sounds. Gestures such as these occurred repeatedly throughout the five weeks of course observation.

In the following example, the instructor was discussing the difference between pronouncing short and long vowel sounds. She exhibited the following gesture to demonstrate mouth shape when producing a short vowel sound.

*Figure 31. Example from Class 2 at 53:06*

T: **Your mouth is more short <--> this way.**
[RH index finger and LH index finger touch the sides of the mouth, pointing up, and slide up and down rapidly seven times]

Ship. Ship.

[ RH index finger and LH index finger touch the sides of the mouth, pointing up]

Sheep.

[ RH index finger and LH index finger touch the sides of the mouth, pointing up, and slide outward pulling the mouth into a smile]

Previously in the class, the instructor had exhibited the above gesture, moving her fingers up and down, but at the level of her chest when explaining to a student how to pronounce the word her.

Example from Class 2 at 36:00

T: No, her, er, er,

[ RH index finger and LH index finger point up and move up and down rapidly at chest]

her.

[ holds gesture]

When she had produced this gesture, it was not clear what she meant. Only after seeing her produce it while explaining the pronunciation of /ɪ/ and /ɛ/ was it clear what she had meant by her previous gesture.

In the fourth class, the instructor touched her mouth multiple times to indicate to students the correct shape of their mouths when they were pronouncing words such as pan and pen. In this segment, she touched her mouth four times.

Example from Class 4 at 29:52

T: Pat. <>
Finally, the instructor produced another series of gestures to indicate to students how they should shape their mouths for the sound /æ/, as in cat. She used both hands to show the shape of her mouth, moving her hands toward and away from her mouth several times, and she used both hands to point to her cheeks.

T: Here are the sounds you are going to be listening to, and they show you how to place your mouth.

For the /æ/.

[Repeats gesture] <opens mouth wide>

Your mouth
[Repeats gesture]

is wider.

[BH with fingers closed move away from middle of mouth to sides of face]

<->

[RH and LH index fingers point to sides of mouth at cheeks]

<opens mouth wide>

like in happy.

[arms return to chest level]

The following is another example of the instructor using gesture to illustrate the shape of the mouth to pronounce certain sounds. The following is an example of the gesture the instructor used to illustrate the pronunciation of the word winter.

![Image of instructor making gesture]

*Figure 33. Example from Class 8 at 42:21*

T: Look at my *mouth*.

[RH index finger points to mouth]

it’s round.

[RH thumb and index finger form a tight circle around lips]
To illustrate the shape of the mouth, the instructor presented many gestures such as these throughout the course recordings.

In addition, to demonstrate the shape of the mouth when pronouncing the /tʃ/ sound as in *question*, the instructor sneezed, covering her mouth with her hand. This occurred in Class 7 at 31:18.

Finally, in one class, the instructor was demonstrating how to pronounce *banana* by moving her mouth very exaggeratingly. The instructor then laughed and acknowledged, while gesturing with her hands in front of her mouth, that her actions throughout the class were exaggerated.

Example from Class 7 at 27:22

T: *Everything*

*LH fingers closed at mouth*

*we do in here, we emphasize.*

*BH fingers are closed and then open at the front of mouth*

Many of these gestures related to pronunciation might not necessarily be understood outside the context of a language classroom.

**Beats and Syllable Stress**

In addition to these gestures, the instructor utilized beats as part of her pedagogical performance. In the following example, the instructor used beats to indicate syllable stress. When saying all three of these words, the instructor moved her hands together to indicate the syllable containing the /iː/ sound.

T: *eat*

*moved BH together with palms open to indicate the syllable containing the /iː/ sound*
beef
[moved BH together with palms open to indicate the syllable containing the /iː/ sound]
<both of these frames are from the word beef>

complete
[moved BH together with palms open to indicate the syllable containing the /iː/ sound]

Another example of the use of beats to indicate syllable stress follows. In this example, the instructor raised her hand (with a marker in it) and moved it forward to show that the first syllable in the word baseball receives the stress.

Example from Class 2 at 20:06

T: Say that word for me. Baseball.

[RH moves forward with marker in it]

Baseball…Two syllables, the first one is going to get the emphasis.

[last three fingers of LH point to the syllable base on the whiteboard]

<LH thumb and index finger are holding marker cap>
Similarly, another beat gesture that the instructor produced to indicate stress on the first syllable was putting both hands with fingers together, almost in a prayer position, and tilting her fingers to one side.

Example from Class 2 at 23:06

T: first syllable

[BH with fingers together, almost in a prayer position, tilting fingers to one side]

Similarly, the instructor raised her hand high into the air at eye level to indicate syllable stress in the word thirty.

Example from Class 3 at 22:54

T: thir-ty.

[moves RPOD to eye level slightly arching her hand to the left]

**Punching and Syllable Stress.** As another example, the instructor produced several punching gestures when instructing the students on syllable stress within sentences. The following example is from a listening exercise and is representative of several similar gestures she exhibited during the exercise. This gesture also occurred many times throughout the data.

*Figure 36. Example from Class 4 at 4:23*
T: I’m afraid you’ve made a mistake.

[punches air with RHF three times in succession to indicate the three stressed syllables within this sentence]

The instructor also punched the air with a fist to indicate syllable stress in the word *thirteen*.

Example from Class 3 at 22:51

T: Thir-teen.

[RHF punches air at chest level]

Students: Thirteen.

[Teacher uses RHF punches air at waist level as students speak]

This punching gesture to indicate syllable stress also occurred again in the course recordings.

**Clapping and Syllable Stress**

The instructor also clapped to indicate syllable stress, only clapping on the syllable that received primary stress. The instructor did this many times throughout the class and the portion of the course that was observed.

Example from Class 3 at 42:28

T: everything

[BH clap once]

**Deictic Gestures and Syllable Stress**

The instructor also pointed with her index finger to indicate syllable stress, moving her hand forward. She did this several times.
Example from Class 3 at 28:02

T: Thir-teen.

[RH index finger moves up and then back down quickly at chest level]

The instructor also pointed her index finger up while standing on the tips of her toes for emphasis when saying /ʌ/ as in cup.

Example from Class 6 at 6:51

T: We are going to have one that does not have the /ʌ/ sound.

[RH index finger points up at level of face]

Example from Class 7 at 38:41

T: Repeat. Men ‘n’ women.

[LPO lightly taps bottom of right palm twice]

The instructor also used clapping, and hitting the table, to indicate syllabification in words and sentences. In the following example, the instructor is specifically addressing this use of clapping.

Beats and Syllabification

In addition to using beats to indicate syllable stress, the instructor used beats to externalize the process of syllabification.
Figure 37. Example from Class 2 at 18:33

T: How many<br> parts<br> of a word.

[BH clap three times]

the beats

[LH hits table twice]

you can clap it out

[BH clap twice]

These clapping gestures to indicate syllabification continued for several minutes in this class, and the instructor exhibited clapping to indicate syllabification many times throughout the course recordings. The instructor also used clapping numerous times in class five to indicate the number of syllables in words. This use of beats and clapping is part of the pedagogical performance exhibited by the instructor.

Counting and Syllabification

Finally, the instructor also counted the number of syllables in sentences or words on her fingers. This was observed throughout the data.
Deictics, Iconics, and Intonation

The instructor also used a combination of deictic and iconic gestures to concretize intonation.

Example from Class 8 at 45:49

T: When you ask something, your voice

[LH held up with elbow bent]
go down

[LHPD moves down]

when you want

[LH index finger points to mouth]
some information.

[LH draws an imaginary line with thumb and index finger touching]

When your voice goes up,

[LH PO moves up]

Would you like tea?

[BH holding book]

<takes a step forward>

I need to have yes or no.

<nods head when saying yes and shakes head when saying no>

Body Movement and Prosody

In addition to gestures related to pronunciation, the instructor exhibited nonverbal behavior to illustrate prosody. The following is an example of the instructor using her body to illustrate aspects of prosody in speech. In this example from the data, the
instructor was enunciating the sound of /ɪ/ as in tea and /ɪ/ as in sit. When she said /ɪ/, she leaned forward, and when she said /I/, she leaned backward to indicate the difference in the sounds.

*Figure 38.* Example from Class 3 at 14:53

T: /ɪ/

[leans forward while saying vowel sound /ɪ/ as in tea]

*Figure 39.* Example from Class 3 at 14:54
T: /I/

[leans backward while saying vowel sound /I/ as in tin]

Another example of the use of her body to illustrate prosody is the following instance where the instructor leaned forward to illustrate a long vowel sound.

Figure 40. Example from Class 3 at 57:52

T: paper

[leans forward with arms at sides]

<speaks with emphasis on the long a in paper>

Additionally, in the fifth class of the course, when the instructor was behind the podium, she moved away from the document camera and stood on her toes to emphasize the /eɪ/ sound in steak. This occurred at 35:33.

This type of body movement to indicate prosody happened throughout the five weeks of course observations. Although these examples are not gestures, they are indicative of the plethora of nonverbal behavior that the instructor demonstrated along with speech in these classroom observations. They are also representative of the fact that the instructor moved constantly while teaching during the course observations.
Dance

Continuing the discussion of dance presented in the data, in the following figure, the instructor was performing to demonstrate the pronunciation of the long vowel in can’t. This was during a listening exercise. The instructor exhibited this presentation gesture and incorporated body movement as the students were repeating sentences.

Figure 41. Example from Class 8 at 10:25

T: She can’t drive a car.

[LPOU at chest level with arm extended and RPOD at hip level with arm extended]

<hips sway to the right and back>

The instructor also sang and danced when explaining the pronunciation of the schwa sound. She was explaining how to pronounce the word animal and used the name Annie for contrast, referring to Annie the musical.

Example from Class 8 at 23:47

T: Annie is a girl’s name.

[fingertips of BH touch cheeks]

<dances subtly>
Hi. Like in Annie.

[waves LH]

It’s a hard knock life.

[thumbs and index fingers of BH squeeze both cheeks]

<bobs head back and forth as she sings and subtly dances>

Finally, the instructor used an English accent to explain the pronunciation of the word later while gesturing as if holding a cup of tea. Although this was not specifically dance, this was another aspect of her performance when explaining pronunciation.

Example from Class 8 at 32:07

T: Maybe if you were in England, they’d say la-ter.

[LH index finger and thumb connect as if holding a cup of tea; RH with pencil points in front of her as she says England]

<uses English accent to pronounce later with /t/>  

The above instances of dance were all related to the explanation of phonemes, specifically /æ/, in can’t, the schwa, /ə/, and the intervocalic t, pronounced as /d/.

The above examples are all instances where the instructor used gesture, or in some cases, other nonverbal behavior, in the teaching of concepts related to phonetics and phonology. The following section discusses student use of gesture in relation to these concepts.

**Student Use of Gesture**

Some gestures which the instructor produced were re-externalized by the students even though the instructor was not explicitly addressing how to produce gestures at all. The following are some examples of these gestures.
When the instructor produced a gesture to indicate the sound /ʌ/, as in cup, in Class 6, a student in the class, Sp, copied her.

Example from Class 6 at 6:12

T: Cup. You hear the uh.

[RH index finger and thumb move to about an inch apart at chest level, very slightly moves her hand up and down while gesturing]
<nods head up and down to produce a head beat>

Sp: [RH index finger and thumb move to about an inch apart at chest level]

In addition to student imitation of this phonetic symbol, several students in the course were observed exhibiting haptic gestures in response to the teacher’s gestures. The students touched their throats, teeth, and mouths multiple times as in the following examples from Class 2.

In one example, the instructor invited the students to use their fingers to feel their throats to feel the vibration of vocal cords produced by the sound /z/ in please, and many students did so. In fact, many students touched their throats before the teacher actually told the students to use their fingers.

Example from Class 2 at 10:20

T: I can put my finger here.

[RH index and middle fingers tap throat multiple times in succession]

Please.

[holds RH index and middle fingers on throat]

Can you feel it?

[RH index and middle fingers tap throat multiple times in succession]
Take your fingers.

[extends RH index and middle fingers toward the class]

<many students place their hands and fingers on their throats throughout this dialogue>

In another example, the instructor put her fingers in front of her teeth, actually touching her teeth, to indicate that there was no sound coming from her mouth when she said /t/. The purpose of this action was to show that only air was coming from her mouth to make the sound. Several students in the course mimicked this action.

Figure 42. Example from Class 2 at 10:35

T: If I don’t have a voiced sound, example: tea, /t/, /t/, /t/, /t/, you don’t feel it.

[RH index finger points to teeth]

you don’t feel it.

[fingers of LH touch throat]

In the following example, which occurred immediately after the above gestures, the teacher invited the students to put their fingers in front of their mouths so that they would be aware that they could not “feel” their voices. As the following two figures indicate, she first extended her arm toward the class, encouraging them to do the same. Then she
touched her mouth before proceeding to touch her throat. Many students in the class repeated these gestures.

Figure 43. Example from Class 2 at 10:38

T: Put your fingers.

[extends RH index and middle fingers toward the class]

Figure 44. Example from Class 2 at 10:40

T: /ʌ/, /ʌ/, /ʌ/.

[RH index and middle fingers touch lips]

It’s not here.
The instructor touched her throat six times, and her teeth once, from 10:18 to 11:00 in Class 2. She invited the class to use their hands to feel twice, and the students were touching their throats, teeth, and mouths multiple times throughout this segment of the class.

A final example of student use of gesture in this section is clapping to indicate syllabification. In response to the clapping gestures of the instructor to indicate syllabification, one student in the class also clapped quietly.

Example from Class 2 at 19:20

T: Cheese-bur-ger.

[instructor clapped three times]

Sk: [clapped three times immediately after instructor]

Summary of Gestures Related to Pronunciation

The above examples include gestures used in the classroom for the purposes of improving pronunciation. The following table indicates a summary of the types of gestures used for this purpose.
The following section describes gestures that the instructor produced to assist the students in their understanding of lexical meaning.

**Lexis**

In addition to producing gestures which were related to explanations of pronunciation, the instructor exhibited many gestures which were used to support lexical meaning. Although many gestures can fall into multiple categories, an attempt was made to classify the many different types of gestures into discrete categories. The following sections include examples of lexical gestures organized according to iconicics, metaphorics, deictics, haptics, emblems, the incorporation of realia, reflexive gestures, and dance. In addition, a section is devoted to the observation of student gestures.

**Iconic Gestures**

**Character Viewpoint. Action Verbs.** Below are some gestures from the character viewpoint that are combined with mimesis. These illustrate the pedagogical performance
of this instructor while explaining lexical meaning. All of the following examples consist of embodied actions used to demonstrate action verbs.

In the following examples, the instructor was explaining the meaning of the past tense verbs *stuffed* and *grabbed*. To explain *stuffed*, she first quickly put some papers into a bag, and she then illustrated the use of *stuff* as when stuffing food into one’s mouth.

![Image](image.png)

*Figure 45. Example from Class 4 at 59:08*

T: Your mother might say that to you when you eat too fast. Kids do that, too. *<Stuffing noises>*

[RH and LH alternate moving to mouth as if eating rapidly; each hand twice]

Similarly, the instructor demonstrated the verb *grab* by exaggeratingly taking an item from a student.
Figure 46. Example from Class 4 at 59:57

T: If I do this. <> I’m sorry, excuse me. <> Grabbed. <>

[RH and LH each grab an item from student]

<<bends knees and leans forward then turns away from student; “I’m sorry. Excuse me.” directed at student>

I grabbed <.> her stuff.

[repeats a smaller version of gesture with items in hands]

<knees remain bent and body remains leaning forward>

Similarly, the instructor exhibited full-bodied mimesis and gesture to illustrate the word *slip*. 
Figure 47. Example from Class 2 at 52:49

T: Try not to <.> whoop <.> slip.

[LA swings up with LPO]

<left foot kicks with knee bent and body tilts back>

In another example, the instructor used gesture to illustrate driving a car and used her right foot to “hit” the brakes when she was teaching the difference between break and brake. This included the instructor making sound effects and seemingly singing as she gestured.

Example from Class 4 at 22:18

T: When you are driving your car,

[LHF and RHF move as if holding a steering wheel and driving a car]

<the instructor changes her tone of voice, almost singing, when saying this>

and you go eeeeeeeek.

[LHF and RHF remain on imaginary steering wheel, but stop steering]

<right foot slams on an imaginary brake>

that’s the brakes.

[LPO crosses in front of her body from left to right]
The mimetic quality of the instructor’s gestures in the above example was part of a performance. She produced a similar performance when explaining *weigh* in Class 3 at 53:44, coming from her place behind the podium where she was using the document camera to produce both gesture and mimesis. She yawned to indicate that it was morning, then screamed and walked backward quickly, sucking in and placing her hands on her stomach after stepping on an imaginary scale. It was both complex and entertaining, and a few students in the class laughed. In the above examples, the instructor was performing and entertaining the class.

As a simpler example, in the following figure, the instructor walked forward with swinging arms to indicate “actions.”

*Figure 48. Example from Class 3 at 15:14*

T: actions.

*[LA swings back and forward while RA swings forward and back]*

*<exhibits an exaggerated walk forward to demonstrate actions>*
In another gesture from the character point of view, the instructor illustrated wiping dog hair off of her clothes when explaining the meaning of the word *shed*. This occurred in Class 3 at 58:55.

While the above examples include embodiment in addition to gestures, the instructor did exhibit actions from the character viewpoint that were not so grand in nature. The following is another example of gesture to illustrate lexical meaning where the instructor mimicked eating from the character viewpoint. However, the instructor utilized a smaller gesture space than she did to produce the gestures exhibited in the above examples. Again, the instructor demonstrated using her left hand.

![Image](image.jpg)

*Figure 49. Example from Class 3 at 16:55*

T: …or that you ate.

*[LH with fingers together move toward mouth and tap mouth twice]*

The above gestures from the character viewpoint were those which the instructor exhibited to demonstrate actions. The following examples of iconic gestures from the character viewpoint are those which the instructor used to illustrate concrete objects.
Concrete Objects. Iconic gestures were often used to illustrate concrete objects. The following figure illustrates an iconic gesture that the instructor used to demonstrate the lexical meaning of the word *headset*. This was a very clear gesture that she presented, tracing the headband of the headset with her index fingers and then using her fingers to represent the ear cups on the ears.

*Figure 50. Example from Class 1 at 24:36*

T: Every time you see in your book a little icon of headset.

[fingertips of RH and LH meet at the top of the head and come down the sides of the head to the ears where each hand cups each ear with fingertips; RH and LH then meet again at the top of the head and tap sides of head]

The instructor also gestured to illustrate a *headset* in Class 5 at 14:05.

In one class, to demonstrate pronunciation for *any*, the instructor referred to the name *Annie* to create a minimal pair for contrast. She put *Annie* in a sentence, saying “Annie Get Your Gun,” and gestured in the form of two guns. Again, the instructor was clearly familiar with musical theater, and this was reflected in her pedagogy.

Example from Class 3 at 43:32
T: Please don’t say, “Annie” because that’s like Annie Oakley or *Annie Get Your Gun*.  
*[thumbs point up and index fingers point toward the class]*

As another example of iconic gestures as part of her performance, when explaining the words *lad* and *lassie*, the instructor used a Scottish accent combined with palm-down iconic gestures indicating the height of young children. This occurred in Class 5 from 11:30 to 12:50.

**Observer Viewpoint.** In addition to using character viewpoint, the instructor exhibited gestures from the observer viewpoint to demonstrate action verbs. This is illustrated in the following example, where she used her fingers to demonstrate walking.

Example from Class 3 at 11:09

T: She *walked*  
*[RH index and ring fingers point downward moving back and forth; RH is holding pencil]*

to school.  
*[LHF punches the air]*

<teacher is behind podium, with the classroom lights off, using document camera>

It is important to note that the instructor was behind the podium when she presented this gesture. In addition, the lights in the classroom were off because she was using the document camera.

In the following example, the instructor presented a series of gestures to represent parasailing. In this example, the instructor was trying her best to mimetically represent parasailing. Her index and middle fingers represented the two lines which attached to the harness of her parasail.
Figure 51. Example from Class 3 at 16:43

T: Something I did <.> I

[RH forms a fist above and to the right of her head]

<head tilts to the right>

Figure 52. Example from Class 3 at 16:44

Figure 53. Example from Class 3 at 16:45

T: I parasailed. <.>

[RH index and middle finger move from above right toward students]

I parasailed. <.>

[repeats above gesture]
The following frames are a continuation of this presentation of the meaning of parasailing. The instructor used her right thumb to point behind her as she looked up and slightly behind her to indicate that she was up in the air behind a boat. Therefore, this gestural action was both mimetic and deictic at the same time.

Figure 54. Example from Class 3 at 16:47

T: Behind

[RH thumb points behind back]

Figure 55. Example from Class 3 at 16:48
T: a boat, <,> Okay.

[LPOU above and to the right of head moves forward]

<looks up and slightly behind her to indicate that she was up in the air behind a boat>

The above are examples of gestures from the point of view of an observer. However, in the data, the number of character viewpoint gestures far outnumbered the number of observer viewpoint gestures.

**Metaphoric Gestures**

In addition to iconic gestures, the instructor produced many gestures which were metaphoric in order to illustrate abstract ideas. As an example of one of the many metaphoric gestures observed, the instructor demonstrated the word *crazy* when she was explaining the spelling of *ie* and *ei*.

*Figure 56. Example from Class 1 at 56:21*

T: Aghhhhh, makes you crazy.

[RH and LH grab hair at the sides of her head]
Another gesture that the instructor exhibited which had to do with the head and frustration was a metaphor for the head exploding.

Example from Class 6 at 32:22

T: Your head is going to

[fingertips of BH touch sides of head]

explode.

[BH move outward]

isn’t it?

[holds gesture]

Another metaphoric gesture that the instructor exhibited was to illustrate the word understand with an abstract deictic. This occurred in Class 1 at 23:19. The instructor pointed to her ear. This type of gesture occurred frequently throughout the course.

In the next example, the instructor used gesture to concretize pronunciation as something material that can visibly come out of one’s mouth. In this example, the instructor moved both of her hands to her mouth when saying the word sample.

Figure 57. Example from Class 3 at 14:32
T: It’s a little sample of your pronunciation.

[BH, with fingers closed, touch mouth]

Throughout the entire course, the instructor put either one or both of her hands in front of her mouth to illustrate words such as speaking and pronunciation. She also used this type of gesture to accompany related words such as repeat, voices, sound, tell, and songs. This type of gesture, which concretized these aspects of speech, was an extremely common gesture in the classroom sessions which were observed, occurring in Class 3 at 1:01:10, Class 6 at 0:20, 7:24, 8:29, 14:02, 14:25, and 14:39, and Class 8 at 9:00 and 11:45.

In the following example, the instructor was explaining to the students that the incorporation of verbs appealing to the five senses would give the students more compelling speeches.

Figure 58. Example from Class 3 at 15:33

T: That will give you

[BHC]

<this gesture includes two beats>
Figure 59. Example from Class 3 at 15:35

T: a more compelling piece.

[BH with fingers closed move to mouth and then away from mouth twice]

The instructor concretized speech by presenting a gesture indicating something tangible coming out of her mouth, which in this case was a “piece” of their work in the form of a speech to be given at the front of the class.

Cultural Metaphor Gestures. In the following figure, the instructor stated that she was going to talk about how she felt. The instructor represented feeling by putting both hands on her chest. She was perhaps inadvertently teaching American culture since not all cultures associate feeling with the heart.
T: I am going to talk about what things I felt.

[BH touch chest]

<shoulders hunch forward>

The following example is another gesture that the instructor produced to indicate feeling. In this example, as she said felt, she put her hand in front of her chest.

T: felt

[LPOU moves in front of chest]
Again, the instructor was indicating her heart through her gesture. This illustrates the Western metaphorical idea of feeling as coming from one’s heart. This is illustrative of the fact that she concretized many of the words that she presented in the class. For example, this also occurred when the instructor was discussing “in love.” The instructor tapped her chest at the area of her heart multiple times in succession. This was in addition to leaning forward and batting her eyelashes.

Figure 62. Example from Class 7 at 5:42

T: She was in love.

[RH touches chest multiple times in succession; LH holding a sheet of paper]
<leans forward and bats eyelashes with head tilted upward>

A few seconds later, at 5:54, the instructor used both hands to symbolically clutch her heart as she stated, “We were in love.” In addition, in the same class, at 16:42 and 16:58, the instructor produced similar gestures, touching her chest in reference to “talking from the heart.”
Similarly, in Class 6, when the instructor was explaining to students that sometimes even native speakers of English use incorrect grammar, she exhibited two metaphoric gestures with regard to education level.

Example from Class 6 at 14:29.

T: The education level

[LPD and RPD move horizontally from center of chest to sides and return to chest level; fingertips meet both times at chest]

of everybody on television is not

[holds above gesture at chest]

going to be necessarily

[BH beat]

that high.

[RPD at level of head]

With the above gesture, the instructor was indicating that in American culture, more education is indicated as a “higher” level of education even though education is not related to height. Again, she was demonstrating an aspect of North American culture, perhaps inadvertently.

The following is a second example of gesture to accompany the concept of education.

Example from Class 8 at 49:40

T: People speak this way

[beats hands together with top of LHO on RHPU three times]

with education

[LPD at level of head]
and without.

[RH and LH shake back and forth at chest level]

Again, the instructor indicates that a “high” education level means that people have had more education.

Deictics

When the instructor discussed the senses, she presented explicit gestures for each.

Sight. The instructor indicated sight by pointing to her eyes as in the following example. Once again, this gesture did not add a different idea or meaning to the statement that she was making; the gesture was simply a way to reiterate what she was stating with her speech.

Figure 63. Example from Class 3 at 15:19

T: saw

[RH index finger points to right eye and then beats forward twice while LH index finger points up, but rests at shoulder level]

In the next example, the instructor pointed to her eye, almost touching it when once again describing the sense of sight.
T: see

[RH index finger points to right eye]

To illustrate the extensive and repetitive use of gesture in the course, the following example is a repetition of the instructor’s discussion of sight and includes facial expressions as opposed to only gesture. It should also be noted that opposed to simply opening her eyes widely or squinting to indicate sight, the instructor chose to do both. First, she opened her eyes widely, and then she squinted her eyes when saying the word saw.
T: saw

[LH with fingers together held up]

<opens her eyes widely and then squints her eyes>

Haptics

Smell. In the following figure, the instructor described the sense of smell by putting her hand to her nose and inhaling through her nose. This gesture also incorporated a haptic element.

Figure 67. Example from Class 3 at 15:28

T: What are the five senses? Smell.

[puts RH to nose, touching the nose, and smells hand]

Hearing. In the following example, the instructor combined deictic and haptic gestures to indicate hearing. Once again, the choice on the part of the instructor to use both hands as opposed to one hand is important to note.
T: heard

[RH index finger points to and touches right ear while LH index finger points to and touches left ear; then BH index fingers point up]

This gesture is one that the instructor repeatedly produced throughout the entire course for words such as *hear* and *listen*. For example, she repeated this gesture in Class 6 at 13:26, 14:08, 14:43 and 14:55.

Once again, the instructor was repetitive in her explanation of sense, not only gesturing again, but also touching her ear. Again, she repeated the haptic element by touching her ear twice.

*Figure 68. Example from Class 3 at 15:19*   *Figure 69. Example from Class 3 at 15:20*

*Figure 70. Example from Class 3 at 15:59*
T: heard

[LH index finger points to left ear and taps ear twice]

The following is another example of the instructor pointing to her ear when she said hear, but from behind the podium. Pointing at one’s ear is not an abstract gesture, but the function is not a deictic function; it has an abstract function because it refers to hearing as opposed to being a reference to the ear itself.

T: You work with the specific sounds

[LH moves toward and away from mouth with fingers closed]

![Figure 71. Example from Class 2 at 7:46](image)

and you hear it

[LH index finger taps ear twice]

and then you have the time

[LH moves toward and away from mouth with fingers closed]

to say it <.> along.

[LH index finger moves toward and away from mouth twice]
In a similar example, the instructor again exhibited an abstract deictic with a haptic element by pointing to her ear when saying, “That’s what I am listening for.”

Figure 72. Example from Class 3 at 14:56

T: That’s what I’m

[LH index finger taps left ear three times rapidly in succession]

listening for. That’s what we’ve worked on so far.

[LH index finger continues to touch left ear as she speaks]

Once again, when describing hearing, the instructor incorporated a haptic element by actually touching her ear as opposed to just pointing to it.
As the above examples regarding the sense of hearing indicate, the instructor used abstract deictics and haptics to repeat information that she was simultaneously referring to in her speech.

**Taste.** When describing taste, the instructor touched her tongue, again incorporating a haptic element into the gesture.
T: taste

[RH index finger touches tongue]

**Touch.** Finally, the instructor touched the table not only once, but twice to describe the sense of touch. Thus, for four of the five senses, excluding sight, the instructor incorporated a haptic element into her gesture presentation.

![Figure 75. Example from Class 3 at 15:32](image)

T: touch

[taps the table twice]

When discussing the senses, each action was performed, and her gestures included abstract deictics in addition to haptics.

**Emblems**

In the following figure, the instructor indicates *not* with a grand gesture, sweeping her hand across the front of her body. Her choice to use her hand as opposed to only shaking her head to indicate *not* is evidence of the exaggerated form of gesture the instructor used in the classroom to illustrate the points that she was making.
Figure 76. Example from Class 3 at 15:13

T: I am not just going to use...

[moves LHPD from left to right in front of her body]

In another class, as the instructor was explaining the pronunciation of height and weight, she presented another gesture to indicate the frustration that accompanies determining whether to spell words with ie or ei. She hit her forehead with the palm of her hand.

Example from Class 3 at 55:34

T: English!

[LPO hits forehead with RPOU]

<head tilts back>

Another emblem that the instructor used was the thumbs up emblem to indicate the direction of up. This occurred in Class 6 at 0:36. The instructor also used the thumbs up signal when she was describing something positive. This was observed in Class 7 at 19:18. The instructor used this emblem when stating, “It has to be someone who influenced your life positively.” She also used this emblem to indicate something good, or great. For example, she used the thumbs up emblem when saying, “I’ll give you credit
for being here” to indicate to the students that being present in class was good. This was observed in Class 3 at 3:08. As another example, the instructor used the thumbs up emblem in Class 3 at 14:39 when describing “a great vacation.” Finally, the instructor also used her thumb in a horizontal position to describe a bad vacation. This occurred in Class 3 at 14:42. This emblematic gesture is discussed further in the section of this chapter devoted to classroom management.

**Numbers.** In the following example, the instructor asked the class what the five senses were, raising her hand to indicate the number five. Even though this was a beginning class, the students in the class were considered high beginning. This gesture is evidence of the fact that the instructor tended to present a gesture for almost everything she said.

*Figure 77. Example from Class 3 at 15:22*

T: I want you to think of the five senses.

* [LH palm indicates the number five, beating forward three times]  

In a later class, Class 7 at 14:09, when the instructor was reviewing the five senses, she held up her hand once again to produce the gesture for the number five. She also
repeated gestures for sight, feeling, and hearing. The only difference was that she only used one hand; she used her left hand since she was holding paper in her right hand.

Again, in the following example, the instructor combined foreigner talk with gesture. She lifted up her index finger in order to gesture the number one as she told the class that their speeches were going to be one minute long. She was over-enunciating, and she held the gesture for an extended period of time. In this example, the instructor was using foreigner talk accompanied by gesture.

![Figure 78. Example from Class 3 at 14:30](image1)  ![Figure 79. Example from Class 3 at 14:31](image2)

T: You are going to speak for a minute <>.  
[lifts RH index finger pointing up to indicate the number one]  
<very clearly enunciates the word minute>

In the first class, the instructor told the students, “You are going to not feel silly, and you’re going to be moving your mouth in an exaaaaaggerated way to make sure you’re really getting the position of your mouth.” The instructor told the students to do this, and she did this herself while teaching from the beginning of the course in the first class.
Reflexive Gestures

The following example is also illustrative of the instructor’s use of reflexive gestures. As the instructor was describing her vacation, she raised her left hand to indicate herself and then put her hand on her chest to indicate that it was her vacation. This is indicative of the fact that it was self-disclosure, and she exhibited a reflexive gesture by saying “mine.” It is important to note that she was also leaning forward while doing so, using her whole body to explain the language.

Figure 80. Example from Class 3 at 14:59

T: I would tell

[LPO facing the class]
T: mine

[LPO touches chest]

In addition to gesture, the instructor also combined body movement into her lexical explanations.

**Dance**

Once again, in this section outlining lexical descriptions, as with grammar descriptions, the following examples are all instances where the instructor appeared to be dancing from her body positioning or where she was actually dancing while explaining. In the following example, the way the instructor was standing is dramaturgical. She appears to be posing. From examples like these in the data, it was as if the instructor was thinking, “Look at me, and I will illustrate everything for you.” As the instructor said, “Otherwise,” she tilted her head to the left, lifted her left index finger and swayed her hips to the left with her right foot forward and turned out. The function of this appears to be to maintain the students’ attention.
Figure 82. Example from Class 3 at 15:37

T: Otherwise,
[lifts LH index finger]
<tilts head to the left and sways hips to the left with right foot forward and turned out>

In the following example, when the instructor said, “things that you did, felt, saw, heard,” she moved her shoulders up and down, swayed her hips, and moved her feet. Again, in the following frame, the instructor appeared to be dancing. She did this in order to emphasize what she was saying; this was also probably an attempt to ensure that the students paid attention to her.

Figure 83. Example from Class 3 at 15:56
T: Things that you did…

[no gesture]

<moved her shoulders up and down, swayed her hips, and moved her feet>

To further illustrate the idea of communication as dance, in the following example, the instructor demonstrated a Scottish dance, kicking her feet, to illustrate the word *plaid*. She also incorporated gesture to indicate a *kilt*. This was observed in Class 4 at 52:24. A few seconds later, at 52:36, the instructor bounced up and down twice while saying *plaid* again and gesturing.

Finally, the instructor literally danced again in the class when discussing the second speech the students had to present in front of the class.

*Figure 84. Example from Class 7 at 15:56*

T: Or it could be someone who inspired you in music.

[RH bent as if holding a dance partner; LH makes circle in the air with left elbow bent]

<moves feet in a series of dance steps and sways hips>

At another point in the same class, the instructor danced again when referring to her friends who liked to dance.
Example from Class 7 at 43:13

T: My Chinese friends like to go to Diamond to dance.

[RH bent as if holding a dance partner; raises LH with elbow bent and moves it from left to right]

<moves feet in a series of dance steps and sways hips>

**Use of Realia**

In many instances, the instructor used realia to explain vocabulary. She often used whatever objects were in the room. One example was the instructor explaining the slang meaning of *shades*. This is also indicative of the performance aspect in this particular classroom.

*Figure 85. Example from Class 3 at 1:00:05*

T: These are my <...> shades.

[puts sunglasses on with thumb and index fingers; extends remaining fingers of LH]

<purses lips into a slight frown and tilts body to the right>
In the following figure, the instructor combines foreigner talk with gesture, over-enunciating the word *ten* while lifting up the course textbook with both hands to show the students the book even though it is the only text used in the course.

*Figure 86. Example from Class 3 at 17:15*

T: Go to page *ten*.

*The instructor lifts up the book with BH*

<very clearly enunciates the word ten.>

**Student Use of Gesture**

During the course recordings, students were assigned to give one-minute speeches and were allowed to hold one index card with notes when giving their speeches. Students gestured with varying frequencies during these speeches. Some students gestured frequently while others produced very few gestures or did not gesture at all. During the individual student speeches in the fifth class of the course, one student repeated several of the gestures the instructor had exhibited during the course recordings. First, the student pointed to her eye when discussing what she had seen on her vacation. This is similar to
the gestures produced by the instructor when she was describing the incorporation of verbs to appeal to the senses in the speech assignment.

*Figure 87. Example from Class 5 at 55:52*

S: I *see* the <*> the <*> *como se dice paisaje?*

*[RH index finger touched right cheek]*

<*the student should have used the past tense of see>*

In the rest of her speech, the student repeated this gesture for *saw* and produced similar gestures to those that the instructor had produced in the class for *think* and *forget*, pointing to the side of her head.

**Mirroring.** In the fourth class, as the instructor was teaching a lesson, a student was trying to relate the word *paws* to the instructor. The student gestured with both hands to try to explain this, and the instructor mirrored the student’s gesture. The instructor mirrored with one hand because she had her book in her other hand. The student held both palms up and then rotated them palms down, and the instructor did the same with one hand. This occurred in Class 4 at 27:33.
Another example of mirroring with regard to lexis occurred in the seventh class during pair work.

Figure 88. Example from Class 7 at 42:28

T: Would you like your eggs over easy?
[LH moves from LPOD to LPOU]
<the instructor holds the gesture; Sp mirrors instructor’s gesture of palm open and up>

The same student mirrored her again half a minute later as she talked about egg rolls. Example from Class 7 at 43:00

T: Egg rolls. Chinese egg rolls?
[LH and RH index fingers touch, presumably to represent a small egg roll]
<the instructor finishes the gesture; Sp mirrors instructor’s gesture with RH>

In the first class, the instructor was describing how the location of Milwaukee, Wisconsin is similar to the location of Korea. Presumably, this was in reference to latitude. The instructor gestured to illustrate this, and one student in the class mirrored her gestures. The student who mirrored the gesture was a male student from Korea who mirrored the gesture with a pencil in his hand.
Figure 89. Example from Class 1 at 23:11

T: The location
[places RPD on top of LPD with elbows bent and arms horizontal]
of
[lifts RPD about six inches above LPD]
Wisconsin
[connects index fingers and thumbs to make a circle shape]
is very much like
[RHP moves in a vertical then horizontal line]
Korea.
[RH index finger points to Sb] <although teacher is addressing the whole class>
Did you know that?
[RPD begins above LPD; then BH move outward in a horizontal line]
Sb: Yeah.
T: <> It’s very much
[teacher’s RHP moves in a vertical then horizontal line]
T: in the same
teacher’s RHP moves in a vertical line

<=> area of the world.

connects index fingers and thumbs to make a circle shape

[Sb copied her gesture with his LH by drawing a horizontal line from his right to left using his pencil in a horizontal position]

Summary of Gestures Related to Lexical Meaning

The above examples demonstrate some of the instructor’s gestures used to describe lexical meaning and the student use of these gestures. The following table indicates a summary of the types of gestures used in relation to lexis.

Table 6

Data Display of Gestures Related to Lexical Meaning

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Type of Gesture</th>
<th>Specific Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>action verbs</td>
<td>iconics from the character viewpoint</td>
<td>concrete objects</td>
</tr>
<tr>
<td></td>
<td>iconics from the observer viewpoint</td>
<td>action verbs</td>
</tr>
<tr>
<td></td>
<td>metaphoric gestures</td>
<td>abstract ideas</td>
</tr>
<tr>
<td></td>
<td>deictics</td>
<td>abstract ideas</td>
</tr>
<tr>
<td></td>
<td>haptics</td>
<td>abstract ideas</td>
</tr>
<tr>
<td></td>
<td>emblems</td>
<td>direct verbal translation</td>
</tr>
<tr>
<td></td>
<td>the incorporation of realia</td>
<td>concrete objects</td>
</tr>
<tr>
<td></td>
<td>reflexive gestures</td>
<td>to indicate self</td>
</tr>
<tr>
<td></td>
<td>dance</td>
<td>emphasis</td>
</tr>
</tbody>
</table>

Gestures used for the purpose of explaining lexical meaning were the most frequent type of gestures observed in the data. Of note is that, even when not asked by the
students, the instructor explained vocabulary words or terms. She frequently explained almost every word that was present in a listening exercise. It often seemed that the focus was more on vocabulary than on pronunciation. For example, at one point in one class, the instructor asked the students if they had any questions about the meaning of any of the words, and a student asked about the pronunciation of sail. The instructor said the word but also explained the difference between the verb and noun. The student interrupted her with, “Yes, but the pronunciation.” The instructor answered by first mentioning the word sell, explaining the meaning of sell with gesture. She then stated the word sail a few times, also explaining that when a word has two vowels, the first vowel is spoken and long. She did this by saying, “When two vowels go walking, the first does the talking,” with gesture. Then the instructor continued by explaining the meaning of the word sale with gesture. This explanation of lexical meaning provided her with the opportunity to perform. This occurred in Class 3 at 1:04:00. This illustrates the instructor view of the importance of vocabulary. This also explains the many explanations of lexical meaning and gestures that accompanied them. The following section includes gestures used for the purposes of classroom management.

**Classroom Management**

In addition to gestures related to grammar, pronunciation, and lexis, many gestures fell into the category of classroom management. The following gestures are those which were not specifically related to a distinct linguistic category. Rather, they were gestures the instructor used to indicate to students information such as how she wanted them to respond to her, what she expected of them with regard to studying and learning, and what her response to their answers was. Gestures related to classroom management differ from
the other gestures present in the data in that management gestures only consisted of emblems. In addition, these types of gestures were the only gestures observed which were explicitly taught. This section of the chapter begins with a description of emblems used for the purposes of classroom management that were not overtly taught. This is followed by a discussion of the gestures which were explicitly taught and re-externalized by the students.

**Emblems**

To begin, the instructor produced several emblematic gestures used for the purposes of classroom management. An emblem that the instructor used regularly was putting her index finger in front of her mouth to indicate to the students that she wanted them to be quiet. In relation to management, the instructor used this gesture in instances such as when she did not want them to yell out answers or when she wanted them to just listen to a listening exercise without repeating words. In one class, she combined this gesture with leaning forward for emphasis. This occurred in Class 3 at 37:34. In this example, she told the class not to yell out answers while producing this gesture, leaning forward, and saying, “Shhhh.” She exhibited this gesture several times throughout this class and throughout the course recordings.

Another gesture related to classroom management was the North American gesture that would traditionally be used to indicate to someone to come. When the instructor wanted the class to repeat a word or give her an answer, she exhibited this gesture.

Example from Class 6 at 11:00

T: Let’s try it.

* [moves left palm to open position to prepare for gesture]
doesn’t <word in textbook>

[begins with LPO and then curls fingers forward and repeats]

This continued as the instructor had the class repeat three more words. The instructor also used this gesture repeatedly throughout the course recordings.

**Dance.** Another gesture that the instructor exhibited was snapping her fingers while dancing and singing, “Thank you and good night,” when the class was finished. This was observed at the end of Class 3 at 1:09:01. At the end of Class 4, at 1:02:50, the instructor danced and sung, “Thank you and good night,” again, but did not include the snapping gesture.

These were all emblematic gestures that the instructor used for the purposes of classroom management. The above gestures are examples of those which were not explicitly taught. The following section includes those emblematic gestures which were used to manage the classroom and were overtly taught to the students.

**Student Re-externalization of the Teacher’s Emblematic Gestures**

Many of the teacher’s emblematic gestures which fell into this category of classroom management were gestures that the instructor specifically taught the students. They were gestures that she explicitly addressed how to produce. Thus, many of these gestures were re-externalized by the students.

One example of a student’s re-externalization of the teacher’s pedagogical gestures in the data was in the first class. In relation to classroom management, the instructor indicated to the students that when she wanted them to show that they understood something, she wanted them to give the thumbs up signal, and when they did not understand something, she wanted them to place their thumbs in a horizontal position.
She stated that she did not like the thumbs down signal. As the instructor was explaining this, several students in the class repeated the gestures with their thumbs in the thumb up or thumb horizontal position.

The following figure shows the instructor explaining that she would like these gestural responses. First, a student, Si, in the front row copied the instructor with her thumb in the up position. Then the student copied the instructor with her thumb in the horizontal position as shown in the figure.

![Image](image.jpg)

*Figure 90. Example from Class 1 at 17:06*

T: Yes, okay.

[RHF with thumb up]

[Si in front row also has RHF with thumb up]

Maybe, okay. Er. Maybe or no.

[RHF with thumb horizontal]

[Si in front row also has RHF with thumb horizontal]

When the instructor asked a question again a few questions later, several students answered with these gestures, thumbs up or horizontal, depending on their knowledge.
Some students also responded with their thumbs down. In the first of the following figures (Figure 91), the same student, Si, also responded with her thumb in a horizontal position because she did not know the answer. Note that in the second figure (Figure 92), two students in the front row, Sb and Sk, have their thumbs up.

![Figure 91. Example from Class 1 at 17:13](image1)  ![Figure 92. Example from Class 1 at 17:13](image2)

T: So, you know where Milwaukee is? Great. Great.

[ Teacher with RHF with thumb up; Si in front of teacher with thumb horizontal; Sb and Sk on teacher’s left with thumbs up ]

In the following example, the teacher continued checking for comprehension with the horizontal thumb gesture, and a student, Sm, on the teacher’s right responded with the same gesture. This is visible in the frame.
Figure 93. Example from Class 1 at 17:23

T: How many of you are about here?

[RHF with thumb horizontal]

[Sm in second row also has RHF with thumb horizontal]

In the same class, a few minutes later, the instructor asked the students if they had computer lab accounts, repeating these gestures for yes and no. Several students responded using the gesture she had just taught: thumbs in the horizontal position. Other students produced the gesture with their thumbs down.

Figure 94. Example from Class 1 at 20:33

Figure 95. Example from Class 1 at 20:33

T: Do you have a Novell login? Yes or no?
In the same class, approximately 15 minutes later, at 34:45, the instructor asked the students how many were “good spellers.” Again, she demonstrated the gestures she wanted the students to produce. Again, several students repeated the gestures of thumbs up or thumbs horizontal, indicating whether or not they were good at spelling.

In the fourth class, at 34:05, the instructor exhibited these two gestures again. This time asking the students to hold their thumbs up if they had heard the same sound or horizontally if they had heard different sounds. The instructor asked about six word pairs, modeling the two gesture choices with each question, and many students in the class responded using these two gestures. In addition, some students responded with thumbs down.

More examples of this occurred in Class 4 at 59:22, Class 6 at 30:37, and Class 7 at 13:01. The instructor used this gesture when students gave a correct answer, made a statement that was correct, or used past tense correctly. In addition, the instructor used this gesture when asking how many students in the class had chosen all the correct answers on an exercise. This was observed in Class 3 at 41:26. She also did this in Class 2, at 52:31, using her thumb in the horizontal position to ask how many students had missed one answer. This was on an exercise that had six possible answers. In response, one student raised her hand.

**Numbers.** Other gestures that the instructor specifically taught were gestures for numbers. The instructor asked the students to show her the answers they had chosen for a
different listening exercise using gestures for the number one or two. This occurred in Class 4 at 37:30. She used her thumb for number one and the standard North American gesture of index and middle finger for the number two to demonstrate, but when she asked about the specific questions, she alternated between using her thumb and index finger to indicate number one. She also alternated between using her thumb and index finger as well as index and ring finger to indicate number two. When the students responded, they generally used the standard North American forms to answer. However, some students responded with the other forms. For the first answer, one female student, St, used her index finger to answer one, but then switched to using her thumb. Perhaps this was because the most recent gesture the instructor had exhibited was her thumb. However, the student then switched back to her index finger and laughed because the instructor held her thumb up again. Another female student, Se, from Peru used both forms for number two. When she responded with her thumb and index finger for two, the instructor had just held up her index and ring finger.

In the second class, when the students were answering a question about a listening exercise, the instructor specifically addressed how the students produced the gesture for the number three. She asked the students to show her how they indicated the number. She discussed the gesture for the number three for almost a full minute, specifically stating which way of producing the gesture was standard for North America. She asked the students to produce their own gestures, and she mirrored their gestures. In turn, the students mirrored the gestures she presented.
T: Show me.

(points to individual students with her index finger)

Show me.

(teacher slightly wiggles and bends her RH ring, middle, index and little fingers)

[Se holds up RH middle index and little finger]

Why I like you to do that anyway, I like to see how you do three.

(teacher holds up RH ring, middle, and index fingers)

(teacher’s LH also points to a student as she says, “you do”)

[Se still holding up RH middle index and little finger]

It is interesting that even though the instructor explicitly addressed the North American form of *three*, this was not how she always gestured for the number throughout the course. If the instructor was merely indicating the number *three* without counting, she would gesture in the North American form. This occurred in Class 5 at 20:36 and 23:20 and in Class 4 at 25:00. However, her counting often began with her thumb as number *one*, her index finger as number *two*, etc. This was observed in Class 5 at 27:45 and 31:24. So, very often, the number *three* was presented as including her thumb, index, and
middle finger. In fact, in the above conversation, the instructor began counting in this way. Additionally, she often presented the number one with her thumb. This occurred in Class 5 at 20:59.

**Summary of Gestures Related to Classroom Management**

The above examples demonstrate the instructor’s gestures used in relation to classroom management. The following table indicates a summary of the types of gestures used for this purpose.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Type of Gesture</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Management</td>
<td>emblem (Shhh)</td>
<td>to indicate to students to be quiet</td>
</tr>
<tr>
<td></td>
<td>emblem (come)</td>
<td>to get students to speak</td>
</tr>
<tr>
<td></td>
<td>emblem (thumb)</td>
<td>to check for understanding</td>
</tr>
<tr>
<td></td>
<td>emblem (thumb)</td>
<td>to ask yes or no</td>
</tr>
<tr>
<td></td>
<td>emblem (thumb)</td>
<td>to indicate approval</td>
</tr>
<tr>
<td></td>
<td>emblem (snapping)</td>
<td>to conclude the class</td>
</tr>
<tr>
<td></td>
<td>accompanied by dance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>to explain</td>
</tr>
<tr>
<td></td>
<td>number</td>
<td>to check for understanding</td>
</tr>
</tbody>
</table>

The gestures related to classroom management were only emblematic and were the only gestures that the instructor explicitly taught during the observations. As with the gestures in the other categories, these gestures included a performative element as well.
The above gesture categories describe the gestures that occurred while the instructor was leading the class as a whole. The following section describes the gestures that were observed during the pair and group work that occurred during the class observations.

**The Use of Gesture in Pair and Group Work**

The following is a description of all of the pair and group work that was observed in the recordings. The following table indicates the amount of time spent on pair and group work where the students were speaking. This does not include the initial time the teacher used to explain what was expected of the students during the activity. A more detailed description of the observed pair and group work follows.

Table 8

*Time Spent on Pair and Group Work*

<table>
<thead>
<tr>
<th>Class</th>
<th>Total Time Dedicated to Pair and Group Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>7:45 (segments of 3:15, 0:20, and 4:10)</td>
</tr>
<tr>
<td>3</td>
<td>0:47</td>
</tr>
<tr>
<td>4</td>
<td>1:49</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>4:55 (segments of 2:01 and 2:54)</td>
</tr>
<tr>
<td>7</td>
<td>5:37</td>
</tr>
<tr>
<td>8</td>
<td>5:53 (segments of 3:23 and 2:30)</td>
</tr>
</tbody>
</table>

In the first class, students did not engage in pair or group work.

In the second class, students participated in group work for approximately 3 minutes and 15 seconds, from 26:15 to 29:30, but it took some groups a minute or more to determine which student would repeat which part of the conversation in the book since the instructor had put the students in groups of three, but the conversation had four
speaking parts. The student use of gesture that was observed during this interaction primarily consisted of the students pointing to the book, each other, or themselves to determine who would read which part of the dialogue. The teacher’s interaction with the students was primarily to manage the groups. Pronunciation correction was not given other than to correct one student on her intonation of the word *really*. The teacher repeated the word, and the student repeated it back to her. The majority of the gesture on the part of the instructor was to point to where she wanted a student to sit or indicate which speaking part she wanted a student to have. The instructor used both her index finger and her whole hand to do this. The instructor also pointed to the text when referring to it. A few times, she pointed to her ears to indicate to students that she wanted them to speak.

Also in the second class, before a listening activity, the teacher told the students they could complete the listening activity with the same members of their group, but once the teacher started the listening, the students no longer worked together. So, they only spoke for about 20 seconds before the listening started. Only a few students took this opportunity to talk.

In the final instance of group work in the second class, the instructor had the students work in groups to tell their partners their names and spell them. They did this for approximately four minutes from 34:30 to 38:40. During this time, the instructor listened to the students in their groups and corrected the students. In this segment, the teacher mirrored a student, Sm, who was using her pencil to count on her fingers the number of letters in her name as she said them. The teacher used her right hand to count, beginning with her thumb. This occurred at 35:10.
In the third class, the students had 47 seconds of pair work, from 29:48 to 30:25, but only 9 of 16 students participated by speaking with their partners. No significant gesture on the part of the students was observed during this interaction.

In the fourth class, the instructor had the students work in groups to practice a dialogue, and then she went around to some of the groups. This occurred from 7:01 to 8:50. The gestures in this segment consisted primarily of students pointing to each other and themselves to decide who would read which part of the dialogue or whose turn it was to speak. In addition, the student gestures consisted of pointing to the book.

In the fifth class, no time was dedicated to pair and group work, but the last 15 minutes of the class was devoted to six student speeches.

In the sixth class, students were first in pairs with one group consisting of three students for 2 minutes and 1 second from 7:58 to 10:09. They were to determine which word in a group was pronounced differently, so it was a book exercise, and not necessarily a communication exercise. Gestures included students pointing to the book and shrugging their shoulders with palms up to indicate not knowing an answer. The second segment of pair and group work, from 26:03 to 28:57, lasted 2 minutes and 54 seconds. This was also an exercise in the book, and it was somewhat difficult. As a result, the students were focused on writing the answers more than communicating. However, students did point to the book.

In Class 7, from 39:49 to 45:26, the students were in pairs for 5 minutes and 37 seconds. During this time, the teacher had a conversation with one pair of students. After she moved on to another group, these two students, St and Sm, were discussing the
difference between soap and soup. During this exchange, St exhibited the exact same gesture for *shower* 16 seconds after Sm had.

*Figure 97. Example from Class 7 at 45:28*  
*Figure 98. Example from Class 7 at 45:47*

Sm: Yes, soap for...*shower*.

[RH rubs left arm as if washing it]

St: For *wash*, take a shower.

[LH rubs right arm as if washing it]

In Class 8, students first spent 3 minutes and 23 seconds in groups. In this segment, one student, Sg, mirrored another student’s, Sl, gesture.

*Figure 99. Example from Class 8 at 19:28*  
*Figure 100. Example from Class 8 at 19:29*
Sl: It’s short.

*LH index finger and thumb slightly apart at level of mouth*

Sg: Short, Short.

*RH index finger and thumb slightly apart at level of mouth*

<nods head in agreement>

This was a gesture that the instructor had previously produced when explaining long and short vowels although in this exchange the instructor indicated the term “short” with both of her hands together.

*Figure 101. Example from Class 8 at 19:18*

T: …or the short.

*LPO and RPO come together to face each other at chest level*

<instructor is leaning forward>

The second time the students were in groups, they spent 2 minutes and 30 seconds practicing the reduced pronunciation of *or*. Some other students also exhibited gestures as they were speaking. The total time spent in pair work was 5 minutes and 23 seconds.
Overall, the five weeks of course recordings contained ten instances of pair and group work with an average length of 2 minutes and 6.9 seconds.

Student Survey

In addition to the five weeks of class observations, written student surveys were given to students (Appendix E). Of the 19 students in the class, four students returned the written surveys: one male (Sa) and three females (So, St, and Sv). It is important to note that this was a beginning level class, and the students’ writing ability was somewhat limited. Grammar and spelling mistakes in the following student survey answers have been corrected.

All of the students indicated that they were aware of the gestures that the teacher used. One student (St) commented that the instructor used gestures “every time” in the class, and that “this is really important for teaching and learning.” Another student (So) commented that, “It’s very important for us.”

All of the students indicated that they were aware of the gestures that they used. When asked what they thought about the gestures that they used, one student (So) commented that it “is better for how we pronounce the word.” Another student (St) stated, “When I speak, I love using the gestures, but usually in my language because I don’t know a lot of gesture in America, and I don’t like American gestures very much.” Thus, this student was aware that gestures in America are different from gestures in other countries. This was the same student that gestured to the instructor when she did not know the term for cats’ paws. In her student speech, she had her hands in her pockets for parts of her speech, and she did not produce a lot of gesture although she did produce some gestures, particularly beats, which were presented with her hands at her sides.
When asked if their current teacher had taught them gestures, one student (So) indicated that she had not and another student (Sa) wrote, “I don’t think so,” even though the data indicated that the instructor had both directly and indirectly attempted to do so. Two students answered yes (St and Sv). In connection with this question, students were asked to relate which gestures they had been taught. One student (Sv) wrote “body language,” and the other (St) wrote, “I don’t remember exactly.”

Three of the four students (Sa, St, Sv) indicated that they had not had another teacher teach them gestures. The one student (So) who indicated having been taught gestures was taught gestures “in the workplace.”

When the students were asked how they felt about becoming like an American by using American gestures, the students’ reactions varied greatly. One student (So) wrote, “I love it.” Another student (St) wrote, “I don’t like American gestures because American culture is totally different from my culture, and gestures, too.” Another student (Sv) wrote, “It is different from my country.” Finally, the fourth student (Sa) wrote, “I don’t think that is possible because my mentality is different.”

When asked for any other comments about the teacher’s gestures, one student (Sa) wrote, “I like them. I found them good.” When asked for any other comments about their own gestures, only one student (Sa) answered by writing, “I use them to try to be a good person.”

Finally, when the students were asked whether they would be interested in talking further about the teacher’s gestures, one student (St) wrote, “Yes. Because I have never thought about this.” In previous answers, this student had indicated awareness of the teacher’s gestures, her own gestures, and the teacher having taught gestures. Thus, the
student was contradictory in this regard. Another student (Sa) simply wrote, “I am interested in any talking.”

**Instructor Interview**

After the recordings were viewed and analyzed, an instructor interview was conducted in order to show the instructor video clips of her teaching. See Appendix D for a list of the planned questions to ask the instructor. See Appendix H for a transcript of the interview. In the following excerpts from the interview, R signifies the researcher. The instructor interview was digitally recorded and field notes were recorded both during and immediately after the interview.

In all, the instructor was shown four video clips from the data. The clips were deliberately chosen so that they included gestures from each of the categories of grammar, pronunciation, lexis, and classroom management. While each clip was chosen to represent a specific category, each clip also included gestures from other categories. A summary of the clips, including the particular class, specific segment of clip, and types of gestures exhibited, is indicated in the following table.
Table 9

*Video Clips Used During Instructor Interview*

<table>
<thead>
<tr>
<th>Primary Purpose</th>
<th>Class</th>
<th>Time</th>
<th>Type of Gesture</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar</td>
<td>3</td>
<td>14:16-15:42</td>
<td>abstract deictics</td>
<td>to indicate past tense</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>with stepping backward</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>abstract deictics</td>
<td>to indicate senses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>body movement</td>
<td>to emphasize pronunciation of short and long vowels</td>
</tr>
<tr>
<td>LEXIS</td>
<td>4</td>
<td>58:40-59:38</td>
<td>whole body mimesis</td>
<td>to demonstrate action verb <em>stuffed</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>incorporation of realia</td>
<td>to demonstrate concrete term <em>stuff</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>emblem (come)</td>
<td>to indicate to the students that she wanted them to repeat</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>5</td>
<td>5:15-5:40</td>
<td>metaphoric gestures</td>
<td>to indicate vowel length</td>
</tr>
<tr>
<td>Management</td>
<td>1</td>
<td>17:00-17:35</td>
<td>emblems (thumb up and</td>
<td>to elicit a yes or no response from students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>horizontal)</td>
<td></td>
</tr>
</tbody>
</table>

**Clip 1 - Grammar**

To begin, the instructor was asked if she had ever seen herself on video. She responded that she had, but it was a very long time ago. The instructor was then shown the first video clip, which was chosen because it included the instructor using abstract deictics to point to the past tense while she stepped backward. After being shown the clip, her initial response was a comment about her specific purpose in the lesson, which was to explain to the students to incorporate many verbs into their speeches. However, when she was asked what she noticed about the clip, she said, “…I’m using a lot of the things that make our husbands crazy. We do a lot of this stuff because we are ELL. ESL. That’s what you say [addressed to researcher]. So, I am very Italian when I speak. I think that
just comes with the territory from being an ESL teacher for so long, and I enunciate really carefully because this is a pronunciation class.” Therefore, the instructor recognized her extensive use of gesture in addition to her clear enunciation.

The instructor continued by indicating awareness of her embodiment and other nonverbal behavior. She stated, “So, gestures and maybe you can even think of those other body…’I’m doing gestures with my mouth and pronunciation, eyes, everything. You have to engage on many levels. Teachers lose them. You know, I’ve actually seen teachers as they’re writing, talking. You can’t talk to the board.” This showed that she was aware of her utilization of her face and body language as well as her gesture. Furthermore, she had seen teachers writing on the board while talking to students, and she viewed this as detrimental to the students’ understanding.

Clip 2 - Lexis

In response to viewing the second clip, which was meant to showcase a lexical explanation, she indicated that she was doing the actions in the clip “because you have to.” After watching this clip, the instructor also stated, “It’s funny that you picked me because I am so Italian.” Yet, the instructor was not Italian. She also stated in this segment of the interview, “Sometimes if I don’t have the CD in right or something, I just talk to them.”

After the second clip, it was mentioned to the instructor that all the gestures had been put into different categories, and in response to, “…one is grammar. I don’t know if you notice, but you point to the past,” the instructor finished the sentence with, “for past” and added, “I step backwards, too.” She was clearly very aware of teaching practices.
Clip 3 - Pronunciation

After being shown the clip meant to demonstrate her use of metaphoric gestures related to pronunciation, the instructor did not comment on her gestures to indicate vowel “length,” but commented on her accent. She said, “Well, that’s my real mid-west ‘bag.’”

<@> It’s funny. I have my Korean students say, ‘Bag.’ <emphasizes vowel> It’s funny for them to say it that way. Buckle. Uncle Buckle.” <@> Therefore, in addition to being aware of her gestures, the instructor was cognizant of her mid-western accent.

Clip 4 – Classroom Management

In response to the clip related to classroom management gestures, the instructor stated, “I like them to participate, but they don’t always have to verbalize it.” She indicated that she utilized the emblematic gestures with her thumb to check for understanding. She also stated that she was mindful of the fact that she never put her thumb down because she preferred to have her thumb in a horizontal position.

Theater and Dance Background

In addition to showing the instructor these four clips, the instructor responded to a question about her theater background with lots of detail about her theater experience. She also included history of her dance experience.

R: So, what’s your theater background?

T: Did you know that I had a theater background?

R: No, I don’t, but just from here…

T: Oh, okay. I had wanted to be an actress, and I had…in high school, I would go downtown at night, taking the bus to Milwaukee school, Milwaukee Conservatory of Acting. I had Eugene Lesser and Erica Slazick, Walter Slazick’s daughter, the big
director. They were at the conservatory. So, I did think about going into acting. I have my portfolio and all. When I came here, I had thought I wanted to dance. And I wasn’t tall enough to be a nude. And I wasn’t good enough to be a principal. So, then I did take acting. Just like you know, community acting and stuff. In high school, I did some things. So, I thought about that. I also wanted to be like broadcast journalism, but in my day if you said you loved to go to different places… I wanted to be like Christiane Amanpour or Diane Sawyer. ‘Oh, you like to go to different places in the world or you like to work with people, you should be a teacher.’ They told all of us to be teachers or nurses. And probably I am good at being a teacher, but that would have been something fascinating. So, I always traveled a lot and went to school. Different countries. So, teaching gives you that opportunity to be on stage a bit. So, I get my ya-ya’s that way.

R: I just had a feeling.

T: Yeah, I thought about being an actress. I considered it. Then I didn’t go to Hollywood. I ended up here. So, then it was gonna be more of a dance thing, but truth be told, I’m not that good. I went to <says the name of a dance studio> and stuff like train with all the dancers.

Even though the instructor was only specifically asked about her theater experience, she included her dance experience.

**Handedness**

When asked about the use of her left hand, this particular portion of the interview was as follows:

R: Also, too, you use your left hand when you’re gesturing a lot, like more than would be expected, and my thought on it was maybe because you are used to having …
T: Writing tools. That would be it. You are right on. I use my left because my right is probably using something to do writing.

R: But even if you don’t have something in your hand, I think that’s kind of carried over.

T: Probably. After 27 years of teaching. Actually, I say 27, but it’s more. I have 27 years in this school district, but I started in 1972 in Wisconsin. So, it’s, you know…Golly. A lot of years.

R: So, that’s 38.

T: And your training before that. I’ve actually been in the teaching field like 40 years.

R: That’s a long time.

T: It is. So, I’ve probably always had something to write with in this hand. That makes sense. I’ve never thought of that. That’s funny. I never, ever thought of that.

**Consciousness of Gesture Use**

The following excerpt further confirmed the instructor’s consciousness of her gesture use.

R: Well, I think that’s all. So, you know. You recognize that you are…’cause usually people they don’t, they are not conscious of their gestures, but you are.

T: I probably use them so much. I want to use them, and I have been teased about it a lot. 

*<emphasis on want>* I’ll come home and, ‘Sit down if you want to eat.’ [gestures with both hands palms open to a seat] And, ‘Stop that. <@> Stop that now. Talk to me. You don’t have to go on like that.’

The instructor stated that she used gestures in the classroom frequently because she wanted to use them. In addition, she was teased because of her extensive use of gesture outside of the classroom.
Finally, at the end of the interview, the instructor asked about the nature of the study. In response to the statement, “My research question really is videotaping your class and just seeing what patterns of gesture are there,” the instructor commented, “Right, it doesn’t mean that they are effective or not. Did you explore that aspect of it?” So, the instructor inquired about the effectiveness of this extensive use of gesture.

In the interview, the instructor indicated an awareness of her practices in the classroom regarding the use of gesture and other nonverbal behavior. Though she was certainly not conscious of all of her gestures, she was aware of specific gestures that she exhibited, and she seemed to be quite aware of the frequency of her movements.

**Summary**

As an illustration of the frequency and variety of gesture forms that were observed in the classroom, this chapter begins with a description of a randomly sampled, five-minute segment of the data. This particular segment was not deliberately chosen, yet it illustrates the enormity of gestures that were exhibited at as part of the instructor’s classroom practices. The examples of the types of gesture that occurred throughout the data collected in this particular classroom were then categorized according to the discourse categories of grammar, pronunciation, and lexis with a separate category for gestures related to classroom management. The chapter also includes an analysis of surveys given to the students. The chapter concludes with an interview of the instructor who indicated an awareness of her use of gestures.
CHAPTER 5

DISCUSSION AND PEDAGOGICAL IMPLICATIONS

Overview

Vygotsky (1978) uses the example of gesture in a child, stating that finger pointing represents an interpersonal relationship, and only after this cultural form of mediation is internalized can an intrapersonal relationship develop. Language learning must be viewed in the context of social interaction, and the gesture of others, and specifically in this study, the gesture of a language instructor toward her students, is a form of social interaction and semiotic mediation worthy of attention.


As an aspect of sociocultural theory, activity theory (Luria, 1979; Wertsch, 1991; Lantolf, 2000; Lantolf & Pavlenko, 1995) is essential to the discussion of the data. The instructor in the study is viewed as being motivated by a culturally constructed need to perform as a language instructor in an institutional setting. The way that the instructor
focuses herself as a language teacher is an aspect of activity theory in relation to her motivation for teaching.

This qualitative study, focusing on the role of gesture in the mediation of teaching and learning, examined the discourse and corresponding gestures used in the classroom by one female instructor and her students in a university ESL pronunciation course. Specifically, the observations are of the teacher in interaction with students concerning the subject matter. The instructor and students were video recorded for the first five weeks of an eight-week course, meeting twice per week for one hour each session.

The findings are discussed in relation to the instructor’s embodied practices. The data revealed that the instructor gestured and otherwise mimetically illustrated her communicative intent in order to concretize the language and its meaning. Her performance included nearly constant instantiations of language in terms of gesture.

The gestures observed in the data are organized into the different linguistic categories of grammar, pronunciation, and lexis, which were the focal points of the lessons. In addition, gestures related to classroom management are described according to function. This organization follows the instructor’s efforts to concretize the language and codify it as presented to students, i.e., in relation to pedagogy. Therefore, not only the gesture types, but also the functions, are discussed.

**Organization**

The chapter is organized according to the importance of the gesture patterns that were observed in the classroom, beginning with observations in relation to the teacher. This includes her beliefs about and awareness of her gesture use. This is followed by a discussion of gesture with regard to observations made of the students.
The chapter begins with a discussion of the different components of pedagogical performance as they relate to the present study. This consists of culture as part of the performance exhibited by the instructor. This also includes the concept of dance since the instructor’s practices included this particular element of nonverbal behavior. Further aspects of activity theory are organized according to the ecological notion of a classroom and the instructor’s use of space. The pedagogical uses of space with regard to specific gesture categories are also discussed.

An additional element of the instructor’s performance was the use of foreigner talk. This included the demonstration of the prosodic features of language through embodiment. This section of the chapter includes an argument for a re-conceptualization of foreigner talk as it occurs in the English as a second language classroom, taking into account the differences between what is traditionally defined as foreigner talk and what was observed. Throughout the observations of the lessons, the instructor was also performing the language mimaetically to help students get a better sense of what was being explained. Therefore, mimesis is discussed, as it was another significant aspect of the data in relation to performance.

The results are then considered in relation to concretization. This is organized according to the specific gesture types of metaphors, abstract deictics, beats, haptics, iconics, and emblems as they relate to the instructor’s performance, dance, and use of foreigner talk. Symmetry, handedness, and the instructor’s use of her body as a referential system are also incorporated as they are related to the gestures exhibited. Furthermore, Kendon’s continuum is included as it shifts according to the gestures observed in this second language classroom.
The chapter then includes the instructor’s beliefs about her classroom practices, her perspective on gesture as a meditational form in second language learning, and her consciousness of gesture use. A discussion of authenticity as it relates to language teaching is also included in this section (van Lier, 1996; Lazaraton, 2004). Lastly, in relation to the instructor, her nonverbal attempts at creating intersubjectivity are discussed. The results are then addressed in relation to the students in the classroom. This consists of the appropriation of the teacher’s gesture and pair and group work.

In the ensuing summary, the meaningful contributions that this study offers to the field of applied linguistics are discussed. The limitations of this study are also included. Finally, the chapter concludes with pedagogical implications from this study to the realm of second language research.

**Pedagogical Performance**

An essential component of the instructor’s ESL lessons was performance. Newman and Holzman (1993) and Daniels, Cole, and Wertsch (2007) discuss the concept of role performance from a Vygotskian perspective. In this particular classroom, it is important to make a distinction between the instructor’s roles both as an American and as a teacher of language. By incorporating culture-specific gestures in addition to the other gestures she exhibited, the instructor was performing her role as an American in addition to performing her role as a teacher of language in the classroom.

**Culture as a Component of Performance**

The instructor in the current study acted in a role-specific manner as both a language teacher and an American. In certain instances, such as when emblems were used, her actions were culturally specific. This was illustrated by the instructor’s use of American,
‘thumbs up’ emblematic gestures for the past tense and by her use of deictic gestures to point to the ground to indicate present time. Furthermore, the instructor’s metaphoric gestures to describe education as ‘high’ are further examples of the instructor using gestures to demonstrate culture-specific information. Another example of this was the instructor gesturing toward or touching her heart to indicate love and feeling.

Therefore, the instructor was perhaps inadvertently teaching the students about American culture at the same time that she was teaching about grammar and vocabulary. With regard to past tense, she was also teaching American culture because not all cultures view the past as something that is located behind them. People of some cultures view the past as in front of them since they can ‘see’ what has happened in the past while they view the future as behind them because they cannot ‘see’ what will happen in the future; this is the case with the Aymara people, who live in the Andes highlands of Bolivia, Chile, and Peru (Núñez & Sweetser, 2006). In addition, not all cultures regard having more education as metaphorically ‘higher’ education. ‘Higher’ is a metaphor that was physically instantiated because the instructor was mapping physical space onto conceptual meaning. One form of education is not actually ‘higher’ than another. It is also an emblem, and since the concept of ‘higher’ is always mapped onto space, it is metaphoric. Finally, not all cultures consider feeling as associated with the heart.

In the observations, the instructor restaged her (American) experiences, using gesture as a way of recreating them so that the students could gain an understanding of them. The assumption is that this was the instructor’s way of teaching the students about American culture in addition to teaching them about language. For example, she used musical theater as part of the pronunciation examples in the classroom. In addition, she mentioned
Annie Oakley and referenced musical theater. These references, such as when she referred to the *Annie* and *Annie Get Your Gun*, are particularly interesting given the nature of her pedagogical performance. This clearly indicated that she was familiar with popular theatrical productions, and this interest was reflected in her teaching practices.

The instructor incorporated her American life experiences into her performance as a language teacher. She was a language teacher who was teaching foreign students, and from the analysis of the course recordings, it was apparent that she viewed her role as an instructor to include teaching the students about American culture in addition to teaching them about language.

In the student survey, three of the students specifically wrote that American gestures were different from the gestures used in their countries, recognizing that gestures are culturally specific. One student specifically indicated not liking American gestures, and another stated that becoming like an American by using American gestures was impossible due to having a different mentality. Since students are more successful in relation to their second language learning when they are motivated to be a part of the culture, this has potential consequences with regard to students’ successful acquisition of a second language (Rosa, 2007; Gillette, 2004).

**Communication as Dance**

Kendon (1990) and Wells (1999) refer to communication as a “dance.” In the case of the instructor in this study, this was particularly true with her gestures to illustrate lexical meaning. She would very often exhibit exaggerated gestures accompanied by blatantly overt actions and facial expressions. This made the students in the class laugh at times, especially when she used her whole body to act and dance in order to convey meaning in
culturally constructed forms that students would be able to understand and use to help them with the process of internalizing the English language (Vygotsky, 1978). Additionally, she used foreign accents to help facilitate understanding of the words *lad* and *lassie* and then danced a Scottish dance to explain the word *plaid* (as when wearing a kilt). She also danced to explain that her friends liked to go dancing. Watching the video of this instructor at times without the sound, it might appear that the instructor was dancing or performing as opposed to explaining. The instructor positioned herself like a performer, at the front of the classroom, and appeared to perceive herself as a performer.

In relation to this, the instructor indicated in the interview that she enjoyed incorporating her dance and theater experience into the lessons as a way of fulfilling her desire to perform. The instructor stated,

I had wanted to be an actress, and….I did think about going into acting. I have my portfolio and all. When I came here, I had thought I wanted to dance…I wasn’t good enough to be a principal. So, then I did take acting. Just like you know, community acting and stuff. In high school, I did some things. So, I thought about that….So, teaching gives you that opportunity to be on stage a bit. So, I get my ya-ya’s that way….Yeah, I thought about being an actress. I considered it. Then I didn’t go to Hollywood. I ended up here. So, then it was gonna be more of a dance thing…

The dance exhibited in the data was not expected to be a by-product of formal dance training, but this was revealed in the interview and corroborated the findings.
An Ecological View of the Classroom

From an activity theory perspective, the events that occurred in the classroom were, in an environmental sense, part of an ecosystem (Lemke, 1998, 2000; van Lier, 2004; Thibault, 2004). The events that occurred are considered from an ecosocial semiotic frame of reference because the gestures must be situated in context. The ecosocial semiotics of this particular classroom include the instructor’s use of time and space, her orientation towards teaching as determined from the interview and data, and what she wanted to accomplish. All of these elements are fundamental to understanding how gesture was utilized in the context of this classroom. The data in this study are examined in relation to this aspect of activity theory because the instructor’s beliefs about the nature of the language classroom are a key component of what was observed.

The Instructor’s Use of Space in the Classroom. Regarding the use of gestures within an ecosemiotic framework, the instructor first established her space when she was going to incorporate mimetic actions. The instructor positioned herself in front of the podium so that she was directly in front of the students when explaining a concept or assignment. By coming from behind the podium, the instructor included a performative use of space into her pedagogical performance in the sense that these were ecosocial affordances. When the students saw her walk to a position in front of the podium and stand in front of them, they were able to anticipate what was going to happen. Her movement in order to set the stage was an ecosocial semiotic element of the classroom. This establishment of stage presence was part of her overall performance. In a typical illustration from the data, the instructor was behind the podium, but walked to a position in front of it in order to explain the word *weigh*. In this case, she yawned to indicate that
it was morning and stepped on an imaginary scale, then screamed and walked backward quickly while sucking in, and placing her hands on, her stomach.

Another example of this is when the instructor used gesture and mimesis to illustrate driving a car, moving her arms on an imaginary steering wheel, using her foot to “slam” on the brakes, and making sound effects. She used the entire front of the classroom as if it were a stage. Her belief that she was performing was also corroborated in the interview as indicated above. She assigned meaning to her space by using it for her gesture and movement. In this way, the space became a semiosphere, where semiosis occurred and signs were produced in a self-centered world (Lotman, 1990).

Moreover, when the instructor introduced a new concept, she introduced it in front of the podium, and when she had completed her explanation, she returned to her position behind the podium to focus on the text using the document camera and projector. When she was in this position behind the podium, she did not incorporate whole body movement into her gestures as often. An example of this is when she used her fingers to demonstrate walking from the observer viewpoint. Furthermore, when behind the podium, her gestures were more often within a traditional gesture space for teaching, and she frequently used deictic gestures in relation to using the document camera. This was an aspect of concentrating on the text in front of her so that her orientation and primary focus shifted away from her students to what was on the camera. Overall, from this position, she did not gesture as frequently.

**Pedagogical Uses of Space with Regard to Gesture Categories.** Specifically, the instructor’s pedagogical use of space changed depending on the specific purposes of the
gestures and other nonverbal behavior that she exhibited. This was in relation to the specific categories of grammar, pronunciation, lexis, and classroom management.

First of all, while the instructor’s grammar explanations of the past tense included deictic gestures, which did not require a significant use of space, many of these deictics were accompanied by her backward movement to further emphasize the use of past tense. As noted above, the interview revealed that the instructor was conscious of stepping backward when explaining past tense. Similarly, the instructor utilized forward movement, walking to illustrate the prepositional phrase ‘to the beach.’ The instructor included this incorporation of forward and backward movement in front of the podium to achieve the goal of physically demonstrating grammar explanations in these two instances.

This use of space was in contrast to the instructor’s use of space during pronunciation explanations, which, in general, did not require such a specialized use of classroom space. For example, the gestures used for the specific functions of explaining phonetic symbols, vowel length, mouth shape, voiced sounds, syllable stress, syllabification, intonation, and prosody did not generally require body movement in the front of the classroom. While the data did include instances of the instructor “dancing” to demonstrate these concepts, these more technical explanations remained, for the most part, in her own personal gesture space. It should be noted, however, that the instructor’s personal space was often extended. Additionally, when the instructor was behind the podium, she generally did not need to move to the front of the podium for these explanations. As a specific example of this, when the instructor illustrated the “length” of
vowels by moving her hands outward from her mouth, she did so both in front of and behind the podium.

This use of space with regard to pronunciation explanations was similar to the use of space with the gestures that the instructor used to demonstrate concrete objects and abstract ideas. These were also achieved in a limited amount of space. Iconic gestures from the observer viewpoint, emblems, and reflexive gestures generally only required the instructor’s use of her own, however extended, personal space. Nevertheless, these explanations were often accompanied by body movement. Examples of this include the instructor hunching her shoulders and leaning forward when explaining the concepts of feeling and love. Another example is when the instructor leaned forward while using a reflexive gesture. Therefore, even when the instructor was not using the space of the classroom, she often incorporated body movement, extending both her personal space and what is traditionally defined as gestural space (McNeill, 1992).

This more limited use of space is in stark contrast to many of the gestures and mimetic actions that were exhibited for lexical meaning; many of the gestures that the instructor used to mimetically illustrate action verbs incorporated a significant portion of the front of the classroom. This was demonstrated by her use of iconic actions from the character viewpoint (McNeill, 1992). For example, when the instructor was describing the word *slip*, instead of pointing to the ground, she recreated the action of slipping, leaning backwards with a leg and arm up in the air and putting her other hand back to catch her fall. This was in addition to sound effects. These iconic gestures are discussed further below.
Foreigner Talk

As noted in Chapter 4, a component of the classroom observations was that the instructor’s speech in this study included some features of foreigner talk; however, several aspects of her speech were contradictory to what is traditionally defined as foreigner talk (Hock & Joseph, 1996). For example, the instructor’s speech did not include an increase in volume, nor did it include simplification or attrition of lexical items such as articles, prepositions, and conjunctions. Thus, the quality of a “chunky word-by-word delivery” was not observed in this particular classroom (Hock & Joseph, 1996, p. 421). Additionally, the instructor’s speech did not include an increased use of colloquial expressions, nor was it characterized by an absence of relative clauses or other dependent clauses. Finally, instead of being omitted, inflection was emphasized.

The elements of the instructor’s speech that were in accordance with Hock and Joseph’s (1996) definition of foreigner talk were a decrease in speed and the use of onomatopoeia because the assumption is that the listeners do not understand the vocabulary. Specifically, the aspects of foreigner talk that the instructor exhibited in the recordings were over-enunciation of speech components and increased emphasis. Even when the instructor told a story as a form of self-disclosure, she continued to perform and exhibit features of foreigner talk and did not exhibit regular features of the language. It is clear that her exaggeration of vowel “length” and increased gesture frequency are pedagogical conventions that she uses when teaching.

Foreigner talk is mimetic in general in the sense that if an interlocutor can illustrate words concretely, he or she will do so, most likely resorting to gesture if possible. However, foreigner talk generally consists of a reduction of language. The teacher in this
study did not reduce the language. She was illustrating it to increase comprehensibility. Thus, the instructor’s actions were comparable to foreigner talk in that the primary goal of foreigner talk is to increase comprehensibility, though she did not include a reduction of grammatical elements. Thus, there was a difference between what is traditionally suggested as the definition of foreigner talk and what the instructor was actually doing. The instructor’s actions as observed in this classroom were more of an illustrative register of communication as opposed to simply a reduction of linguistic components.

**Prosody.** Quite notably, when the instructor was teaching, she coordinated her body movement with the prosodic features of the language, which is perhaps specific to a language teacher (see also McCafferty, 2006). In many instances in the data, the instructor used her whole body in rhythmical movement as she was speaking. The instructor embodied the language as part of instruction, using mimesis to kinesthetically represent rhythm, stress, and intonation. Illustrating these aspects of prosody with her gesture, she continually used her body to concretize the verbal aspect of her teaching. The instructor’s use of her body to reinforce her speech is further evidence of the fact that thought and language are dialectically linked (McNeill, 2000). The instructor mapped meaning directly onto her body, using her physical being as illustrative. A typical way that ESL instructors concretely illustrate abstract aspects of prosody is through the manipulation of a rubber band or the use of a kazoo. The instructor in this study did not do that; she used her body and gestures instead. Emphasizing the prosodic features of language was another aspect of the instructor’s foreigner talk, and the instructor did this almost incessantly in the data. In the examination of prosody with regard to the gestures, the instructor used her voice and gesture combined to emphasize rhythm, stress,
intonation, and emphasis. The instructor’s externalization of prosody in this manner was her attempt to help promote students’ language learning.

Reconceptualization of Foreigner Talk as Teacher Foreigner Talk. As indicated in the data, the instructor in this study used gestures accompanied by aspects of foreigner talk (Hock & Joseph, 1996; Bingham Wesche & Ready, 1985; Adams, 1998). It is argued not only that the gesture itself exhibited qualities of foreigner talk, but also that the term foreigner talk alone is insufficient to describe the events that occurred in the case of the language teacher studied.

Regarding the first of these claims, as indicated by the evidence in this study, the gesture space was larger than what might be presumed for the average native speaker of English engaged in a conversation (McNeill, 1992). This use of space was part of the instructor’s performance. Furthermore, the instructor appeared to gesture much more frequently than the average native speaker would, although frequency of gesture use does vary from person to person. Moreover, the total concretization of objects and actions observed in this classroom would not be expected for other forms of discourse.

In addition, the instructor used gestures that were particular to her subject matter such as phonetic symbols. This was also evidenced by the many gestures that the instructor exhibited to show the shape of the mouth when pronouncing certain sounds. In addition, the instructor often touched her teeth and her throat when explaining voiced and voiceless sounds, and these gestures are not common in everyday conversation. Furthermore, the instructor produced metaphoric gestures to indicate “short” and “long” vowels; punching, clapping, and pointing to indicate syllable stress; clapping and counting to indicate syllabification; and iconics to metaphorically illustrate intonation. All of these gestures
are specific to a language classroom. In relation to grammar, stepping and pointing backward to indicate the past are further examples of gestures which would not likely be observed outside of a language classroom. In contrast, the majority of gestures related to lexis and classroom management are those that would be recognized outside a language classroom. One exception might be the thumb in a horizontal position to indicate \textit{maybe} or \textit{somewhat}, which may not necessarily be understood as it is not a traditional American emblematic gesture, although it might be deduced.

Regarding the second of these claims that the term foreigner talk alone is insufficient to describe the occurrences observed in the second language classroom, the term \textit{teacher foreigner talk} is proposed to describe the actions and speech of this language teacher. The term \textit{teacher talk} encompasses a native speaker, or perhaps fluent speaker of a language, teaching students in the same language (Scott, 1998; Sinclair & Brazil, 1998). For example, teacher talk often occurs in early childhood and elementary classrooms (Wilcox-Herzog & Kontos, 1998; Wong-Fillmore, 1985). While teacher talk can be used with a teacher addressing students in their L1, teacher talk also occurs if a teacher realizes that students are at a low level of comprehension, as is the case with ESL students (Wong-Fillmore, 1985; Cullen, 1998). In contrast, the term \textit{foreigner talk} is typically used to describe how a native speaker addresses a foreigner.

To truly delineate the differences in qualities of speech produced in these different types of discourse, the term \textit{teacher foreigner talk} is more fitting. This is a reconceptualization of foreigner talk to include a particular variety germane to the classroom, which does not include speaking loudly, does not change canonical syntax, and does not include omission of words. Furthermore, teacher foreigner talk includes
illustration of the prosodic features of the language and a strong embodied component in the form of mimesis.

An example of this was the instructor pointing to her eyes while discussing sight. This gesture did not add meaning to the statement. The gesture was, by native speaker standards, a rather extreme reiteration of what the instructor was saying. The gestures the instructor presented in this way were used to possibly compensate for a lack of language ability on the part of the students or simply reinforce the verbal channel. This redundancy in the instructor’s gesture and speech is a critical feature of teacher foreigner talk. In the case of this particular instructor, the gestures reified what she was saying, which is the teacher element of teacher foreigner talk.

As McNeill (1992) indicates, a speaker exhibits gestures when an utterance is a departure from context. While the instructor did exhibit this in the data, she also exhibited gesture when the utterance was not in any way a departure from the context. Generally, gesture demonstrates one component of the intended meaning of the interlocutor, and the speech demonstrates another component. However, many of the gestures observed were redundant in relation to what was stated. While this was in contrast to McNeill’s conclusions, the instructor did exhibit gestures as would be expected in that she used gesture to compensate for any potential difficulty the students might have had in understanding. As McNeill (1992) states, a speaker uses gesture when some aspect of an utterance may be somewhat inaccessible to the listener.

**Mimesis**

In the data, mimesis was observed as a foundational element to teacher foreigner talk and performance, although it was most remarkable in relation to explanations of lexical
meaning. The instructor utilized both forms of mimesis, gestural and full-bodied mimesis. It is also necessary to further differentiate between general and cultural mimesis. First, a general mimetic representation can simply be a demonstration of a particular action. However, cultural mimesis includes the ways that people behave as part of a particular culture (Donald, 2001). General mimetic representations by the instructor include the instructor’s use of kinetographic gestures to demonstrate actions such as driving and parasailing. Her fully embodied performance of parasailing showed the students the actions that took place in time, and this gesture consisted of no specific cultural component. Culturally mimetic demonstrations include the instructor’s emblematic gestures, which are American, to metaphorically illustrate the past, higher education, and feeling (as indicated above).

Though these mimetic demonstrations of American emblems are clearly cultural, it is argued that the use of general mimetic forms also contains a component of American culture (Donald, 2001; and McCafferty, 2008b; Gal’perin, 1989). This is because mimesis is not merely a demonstration of iconic meaning. It is associated with performance as exhibited by the gestures and other nonverbal behavior that the instructor produced in order to explain verbs such as stuff, grab, drive, and slip. At a symbolic level, iconicity represents objects and actions; however, the mimetic component of the instructor’s gestures involved her trying to thoroughly recreate the actions themselves. Therefore, even though these gestures may be labeled, for the purpose of categorization, as iconic gestures from the character point of view, these gestures can not only be considered in relation to iconicity. They also conform to culture elements involved in gesture production.
In other words, for readability and clarity, the gestures have been categorized; however, it is necessary to consider their meaning and function, specifically examining the reasons for these bodily demonstrations of gesture in the lexical category. The role of the mimetic gesture on the part of the instructor was to scaffold the students so that they would be able to thoroughly understand the meaning of these different lexical terms. This embodiment demonstrates the way she viewed meaning making in the classroom. For actions that were difficult to represent mimetically, such as parasailing, the instructor chose to represent these actions from the observer viewpoint. This is also in accordance with McNeill (1992) in that the verb *parasail* has no object and, therefore, the observer viewpoint is generally used. However, for the verb *walk*, which requires no object, the instructor chose to illustrate this action from both the character viewpoint mimetically and, in a separate instance, the observer viewpoint. Therefore, the instructor did not always choose to incorporate mimetic actions, even for illustration of the same word. Although she did incorporate observer viewpoint gestures in some instances, gestures from the observer viewpoint were less frequent, but were associated with the demonstration of action verbs.

**Concretization and Mimesis**

The instructor in this study exhibited different levels of concretization from concrete to abstract. In the process of internalization, the movement is from a material, or external, plane to a mental, or internal, plane. In the classroom, the instructor’s gestures indicated the opposite: the process of externalization, which is movement from an internal to external plane with regard to language. In the process of doing this, she was attempting to assist students with regard to their language learning by exhibiting the external
mediational signs that students would be able to use to help them internalize the language (see Vygotsky 1978; Gal’perin, 1989; McCafferty, 2006, 2008a; Roth, 2002).

**Metaphors.** For example, by using gestures to indicate short and long vowel sounds, the instructor was concretizing the abstract. By doing this, the instructor exhibited American metaphoric gestures to assist students with the process of materializing conceptual meaning, as with Zhao’s (2007) findings with regard to metaphoric gestures to represent abstract concepts in academic English writing.

In the current study, the instructor performed several metaphoric gestures to represent the lexical meaning of concepts such as frustration, understanding, and feeling. This was in addition to the many instances where the instructor concretized words such as *speaking, pronunciation,* and *sound.* The instructor exhibited concretization to remedy the fact that ESL students need contextualization. Concretization helps to better contextualize language and meaning through mimetic representation as formed through gesture (McCafferty, 2008b).

**Abstract Deictics.** With regard to the use of deictic gestures in reference to an abstraction, the functional role of these gestures was to demonstrate not only a concrete object or idea, but also abstract meaning (see also McCafferty, 2004, 2008b; Gullberg, 1998). This is important because this illustrates the fact that the instructor in this course was embodying the language while teaching, trying to illustrate everything she possibly could with her hands and body movement even though she primarily used gesture. All of these large and small physical actions are important in relation to the pedagogy of this particular language classroom.
The instructor used abstract deictic gestures to illustrate grammar, vocabulary and linguistic components. For example, the instructor used pointing, which has both mimetic and deictic functions, to point to her ear to illustrate listening. She also used pointing to denote intonation and syllable stress. These are examples of the instructor using gesture for pedagogical purposes. This use of deictic gestures is in accordance with McNeill’s (1992) findings in that most deictic gestures are in reference to something abstract.

**Iconics.** In addition to incorporating iconic gestures into mimetic representations, as indicated above, the instructor used iconic gestures in a more traditional gesture space as part of her pedagogical performance. First of all, as would be expected, for concrete objects that were small, the instructor utilized iconic gestures (McNeill, 1992). To demonstrate these concrete objects, the instructor also incorporated realia. Additionally, the instructor incorporated into her performance many iconic gestures that were for specialized pedagogical functions. For example, several of these gestures were meant to symbolize phonetic symbols. Iconic gestures were also used for the functions of demonstrating mouth shape and intonation. Overall, iconic gestures used for these purposes utilized a smaller gesture space when compared to some of the other gestures used in the classroom.

**Beats.** Beats serve several functions in language (McNeill, 1992). The instructor observed in this study used beats as part of her performance while teaching English. This was evidenced in the data when the instructor used beats to demonstrate syllabification, syllable stress, and intonation. She did this in order to assist the students in their understanding of what she was explaining. This behavior would not be expected from an instructor teaching a subject like mathematics to native English speakers because such a
teacher is not teaching speech and thus does not need to relate to students information such as to how to punctuate syllables, emphasize stress, and denote intonation. This use of beats was a pedagogical tool that the instructor in this study was employing to assist the students in language learning.

**Haptics.** The data also revealed interesting differences in instantiation of language due to the haptic element. For example, the instructor touched her throat because she wanted the students to touch their throats to feel the vibration produced by voiced sounds. She also touched her teeth because she wanted the students to touch their teeth to feel the air coming from their mouths when saying the voiceless sound /t/, thus demonstrating the difference between voiced and voiceless sounds. In these instances, this element of the instructor’s gesture was, again, most likely specific to only a language classroom. Haptic gestures were also used in conjunction with abstract deictic gestures to demonstrate the lexical meaning of senses, as when the instructor touched a table to illustrate the sense of touch and touched her ears, nose, and mouth while discussing the other senses.

**Emblems.** As observed in the data, the instructor specifically taught the students emblematic gestures. These emblematic gestures were the only gestures in the classroom that the instructor explicitly taught, and all of these gestures fell into the category of classroom management. These included the thumbs up and thumb horizontal gestures to check for understanding and to elicit a yes or no response from students. In the interview, the instructor was aware that she used the thumb in a horizontal position and that she did not like to point her thumb down. As stated above, in the interview, the instructor explicitly stated that she intentionally used these gestures as a way for students to fulfill her requirement for them to participate without having to verbalize. This reveals an
aspect of the instructor’s view of how language learning takes place in the classroom. She believed gestures and other forms of nonverbal behavior to be a required component of pedagogy. Presumably, the instructor used these emblematic gestures since they were simple in form.

In the survey that was given to the students, although the students reported that they paid attention to the instructor’s use of gesture, only two of the four students replied positively when asked if the instructor had taught them specific gestures. Furthermore, none of the students could recall the specific gestures that the instructor had explicitly taught them. One student replied that the instructor had taught them body language. Therefore, although the students believed that gesture was beneficial to their language learning, they were unable to produce specific examples of gestures that the instructor had taught them.

Emblematic gestures were also used for the purpose of explaining lexical meaning, and counting was used to indicate syllabification. However, the frequency of emblematic gesture use in relation to explanations of lexical meaning was infrequent, and the use of counting to represent syllabification was the only emblematic use of gesture in relation to the category of gestures for the purposes of pronunciation. With regard to mimesis (Donald, 2001; McCafferty, 2008b), the instructor’s emblematic gesture use was mimetic in this case of counting to indicate syllabification since the instructor was using her body to represent syllables.

**Teaching Context**

Lazaraton (2004) indicated the assumption that the instructor observed in that study gestured with a greater frequency when the lesson focused on meaning as opposed to on
form. Lazaraton also indicated that the instructor exhibited a decreased range of gesture types in form-focused teaching contexts when compared to meaning-focused teaching contexts. The results of the current study corroborate Lazaraton’s findings; the instructor did not gesture as frequently when referring to grammar as when referring to vocabulary or pronunciation.

A possible reason for the minimal data on grammar is that even when explaining grammar, many concepts or words are difficult to concretize into gestures. In the segment of Class 7 where the instructor devoted a lengthy amount of time to grammar, the instructor commonly used concrete deictic gestures and wrote on the board. For example, when saying the word *grammar*, the instructor picked up a handout on verbs as opposed to gesturing with only her hands. This happened twice in the seventh class. It is important to note that in the course recordings, the overall time spent in the class on grammar explanation was minimal. The instructor explicitly presented past tense and verbs only briefly in two of the observed classes, 3 and 7.

**Symmetry**

Many of the gestures that were observed in the classroom were symmetrical. An example of this is when the instructor used both hands to point to both ears. In some instances, the instructor used only one hand to point to an ear to accompany terms such as *listening* or explanations of the sense of hearing. In the cases where she used both hands, the presumption is that she was performing in order to ensure that the students found her interesting and paid attention to her. Another function this symmetry served was emphasis. With both hands, the instructor was overemphasizing to make sure the point of what she was saying was not missed. With these symmetrical gestures is an inherent
redundancy. The assumption is that she was unknowingly exhibiting this symmetrical aspect of her gestures in her performance. This symmetry illustrates one aspect of her performance and embodiment of the language.

**Handedness**

Related to symmetry is handedness. According to McNeill (1992), people use their dominant hand to gesture. Specifically, metaphoric and iconic gestures are performed with the dominant hand whereas beats are not related to handedness. Thus, the instructor was expected to produce these iconic and metaphoric gestures with her right hand. However, even though the instructor was right-handed, numerous gestures were exhibited with her left hand. Presumably, this was because, as an instructor, she often had a whiteboard marker or pen in her right hand and had become accustomed to gesturing with her left hand in those cases. During the interview, the instructor corroborated this assumption, indicating that with over 30 years of teaching experience, she had clearly become accustomed to gesturing with her left hand because she had often had writing tools in her right hand. In the data, even when she did not have writing instruments or other teaching materials in her right hand, she would often use her left hand to gesture.

**The Body as a Referential System**

Another point is that the instructor used her body as a referential system. Whenever the instructor could reference her body, she did. This is related to Donald’s (2001) description of mimesis in that the instructor was using her “whole body as an expressive device” (p. 240). For example, the instructor used reflexive gestures when she referred to herself and exhibited self-disclosure. In addition, she referred to her own body when describing the senses of sight, hearing, smell, and taste. She also referred to her own body
to describe feeling and love. For the purposes of pronunciation, the instructor also used her body as a referential system to explain voiced and voiceless sounds. Many instances of the instructor referring to her body for reference occurred in the data.

**Kendon’s Continuum**

Moving from left to right on Kendon’s continuum (see p. 14 of Chapter 1), gesticulations → language-like gestures → pantomimes → emblems → sign languages, the presence of speech declines, the presence of language properties increases, and idiosyncratic gestures are replaced by socially-regulated signs. In the middle of Kendon’s continuum are pantomime and emblems. The instructor observed in this study exhibited gesticulations, or gesture with speech, and mimetically illustrated with her movements falling primarily into the categories on the left side of the continuum. She moved with notable frequency, with gestures accompanying her speech, using gesture to reinforce what she said. The prosodic features of language were emphasized extensively, not only with her gestures, but also with her head and body movement.

Considering these findings, Kendon’s continuum can be adapted to foreign and second language classrooms. According to the data from this study, a shift occurred to the left in this continuum for this language instructor. Further support for this claim is that the gestures the instructor used were very idiosyncratic and spontaneous. She used many gestures that would not necessarily be understood outside of the context of the language classroom. Some examples of these kinds of gestures are those the instructor used to explain pronunciation such as gesturing in the form of phonetic symbols.
**Classroom Practices**

Throughout the course recordings, the instructor was primarily at the head of the class, presenting information in a teacher-centered lecture format. This observation was corroborated during the instructor interview when she stated, “Sometimes if I don’t have the CD in right or something, I just talk to them.” This statement represented her view that a teacher’s responsibility is to talk to the students. Also, in the interview, in response to viewing a clip related to classroom management gestures, the instructor stated, “I like them to participate, but they don’t always have to verbalize it.” This also demonstrates the instructor’s beliefs regarding the roles of teacher and students in the classroom.

From the data, it appears that the teacher might have viewed such an approach to be culturally relevant to the students as well. A reason for this might be because in many cultures, the view is that the teacher should be speaking at the head of the classroom with the students sitting quietly in their seats. This is particularly true in many Asian cultures. From an activity theory perspective, the data are considered in relation to a teacher-centered classroom. Thus, activity theory can be used to explain the events which took place in this particular classroom.

**Instructor View of Gesture as a Mediational Form in L2 Learning**

In the interview, the instructor commented that instructors should not write on the board while they are talking. She stated, “So, gestures and maybe you can even think of those other body…I’m doing gestures with my mouth and pronunciation, eyes, everything. You have to engage on many levels. Teachers lose them. You know, I’ve actually seen teachers as they’re writing, talking. You can’t talk to the board.” It was the view of the instructor that her responsibility as an instructor was to include gesture as a
meditational form in second language learning. The interview provided evidence that the
instructor considered other means of nonverbal communication essential as well. Another
interesting component of the interview was that the instructor addressed the issue of
whether the current study considered the effectiveness of her gestures or not. Although
she clearly believed it to be a critical aspect of the pedagogical practices of a language
classroom, she inquired about the research related to the topic.

**Authenticity.** Lazaraton (2004) discusses the use of gesture in relation to authenticity
in the classroom, stating that teachers who provide clear, slow enunciation may provide
students with an unauthentic learning environment when this is compared to the English
environment students may encounter outside the classroom. Excessive use of gesture in
the classroom can be construed as providing an unauthentic environment even though
some individuals may be more accommodating to language learners. The teacher
observed in the Lazaraton study indicated,

…I personally like to give a priority to learners’ better understanding of the
content matter over authenticity for beginning and intermediate levels in an ESL
setting. I wouldn’t feel right to leave [a] majority of my students lost because I
imagine that they might feel overwhelmed by authentic English outside the
classroom and the classroom should be the place where they can focus on both
language (form) and feel secure in the non-threatening situation. In this sense, use
of gesture, if not truly authentic, can help facilitate learners’ comprehension. (p. 108)

The instructor in the Lazaraton study indicated a preference for understanding over
authenticity in beginning to intermediate level courses.
It is important to note, however, that gesture use is authentic to the classroom. If it is authentic to the teacher and the students, it does not have to resemble the outside world because it is authentic to the classroom (van Lier, 1996). Gesture and slow enunciation are authentic to the classroom. Due to the gestures exhibited by the instructor in the current study and her responses during the interview, she also appeared to believe that student understanding of the course content is a priority in the classroom.

**Consciousness of Gesture Use**

As indicated by Lazaraton (2004) and Nardotto Peltier and McCafferty (2010), language instructors are generally unaware of the extent of their gesture use. Instructors know that they gesture, but they are so involved in making meaning that they do not seem to concentrate on their gestures. Accordingly, prior to the data analysis, the expectation in this study was that the instructor would have also been unconscious of the gestures she used in the classroom. However, after viewing and analyzing the data, the expectation for the interview was that she would be at least to a certain degree aware of her use of gesture since it was so extensive and specific.

In the case of this particular instructor, the interview revealed that she was highly conscious of not only her gestures, but also her body movement, facial expressions, enunciation, and accent. The instructor stated, “We do a lot of this stuff because we are ELL. ESL. That’s what you say [addressed to researcher]. So, I am very Italian when I speak. I think that just comes with the territory from being an ESL teacher for so long…” She referred to herself as “Italian” since Italians are associated with gesturing frequently and utilizing a large gesture space. She also cited her many years of experience as an ESL instructor as the reason for this extensive and elaborate gesture use. It was also apparent
that she was aware of the extent of her gesture use because of her recognition of the fact that she stepped backward when she pointed behind her to indicate the past tense. After the instructor had viewed the second clip in the interview, it was mentioned that all the gestures had been organized into different categories. In response to, “…one is grammar. I don’t know if you notice, but you point to the past,” the instructor finished the sentence with, “for past” and added, “I step backwards, too.” She was clearly very aware of her teaching practices. In addition, the instructor noted in the interview that she was teased in social situations because of her extensive use of gesture outside of the classroom.

While the instructor was aware, in general, of her use of gestures, she was unaware of some specific details, like the use of her left hand. In the interview, she stated that she had never thought of this aspect of her gesturing. Overall, she was aware of her use of gesture to illustrate, but perhaps not necessarily at a detailed level such as when she walked forward to illustrate the prepositional phrase ‘to the beach.’ Since people in general are also usually thought to be unconscious of their gestures, this was an interesting aspect of this study. This is because the instructor’s conscious and deliberate use of gesture in the classroom had significant effects on the nature of the pedagogy that was observed.

**Intersubjectivity**

The creation of intersubjectivity is generally not one of the strengths of a lecture classroom; this is due to the difficulty of giving individual students attention because of a large number of students. A usual and important component of language lessons normally consists of the instructor creating intersubjectivity by exhibiting behaviors such as mirroring, both when talking to people on a one-to-one basis and when teaching the class
as a whole. Although some instances of mirroring were observed in the data, the instructor in this classroom did not exhibit this aspect of intersubjectivity very often due to the nature of her classroom practices. She was striving to remain the focal point of attention to ensure all eyes remained on her.

Nevertheless, it can be argued, in this case, that the instructor’s choice to illustrate nearly everything she possibly could was her attempt to establish intersubjectivity. The instructor’s frequent use of gesture created intersubjectivity by recognizing the students as not being proficient in English, so this was an aspect of the instructor’s special attunement to them.

From the student surveys that were collected after the observations, it was possible to ascertain how some of the students in the class oriented to the instructor’s use of gesture. It can be argued that the instructor’s illustration of almost everything possible may reinforce particular aspects of the lesson, and it may be intersubjective, but it may not be particularly meaningful. However, all of the students indicated an awareness of the teacher’s gestures, and they all found the instructor’s attempts to modify meaning through the use of gesture as useful. This was indicated by the comments of three of four students who had taken the initiative to voluntarily write on the surveys. Overall, the students viewed the gestures of the instructor as beneficial to their acquisition of the English language, and they indicated a positive view toward gesture in their language classroom.

**Appropriation**

The register of gesture that the instructor exhibited was a catalog of teaching gestures. The students in the class would not have wanted to appropriate the gestures that she used
to explain pronunciation concepts or many of the gestures she used while speaking. It is important to note that this would be different from a native Italian instructor teaching Italian in the United States, as with the instructors in the study conducted by Nardotto Peltier and McCafferty (2010). The ESL instructor in this course was not really teaching American identity per se. The students observed in this study were living in America and did not necessarily need her to present American gestures. The gestures of another American, who was a native English speaker, not an English language learner, would probably be those students would more fittingly want to appropriate. Furthermore, many of the students were not the teacher’s age, and this may have contributed to the minimal appropriation. Finally, the students may not have identified with the teacher because of her role as an authority figure and their role as students. Nevertheless, the students in this course may have adopted some of her gestures, not only the gestures she used because she was American, but also the gestures which she used pedagogically.

Regarding student reproduction of the teacher’s pedagogical gestures, the discussion of microgenesis is somewhat limited due to the nature of the classroom as teacher-centered; however, the students were found to appropriate the pedagogical gestures that the instructor exhibited. This was similar to McCafferty’s (2004b) study where the student beat out the syllables and words, which was also a case of microgenetic analysis.

In one instance, when the instructor was addressing the class as a whole, she clapped to indicate syllabification, and this gesture was also exhibited by a student. Therefore, this was a case of microgenesis (Vygotsky, 1978; Luria, 1982; McNeill, 1992, 2005). The student clapped three times to indicate the number of syllables in the word cheeseburger. Thus, the student used gesture to embody the language through the externalization of
syllable structure. The student’s use of gesture in this way could have been related to her effort to internalize the language (see Luria, 1979, 1982; McCafferty, 1994b, 2004b, 2006; Platt & Brooks, 2008).

Secondly, with regard to pronunciation, one student gestured in the form of a phonetic symbol that the instructor had presented several times in the course. This was another instance of mirroring, and perhaps microgenesis, since the student had likely only been exposed to this very specialized emblematic gesture in this particular pronunciation classroom.

In a third example of student appropriation of gesture, during work in pairs, one student produced a gesture that the instructor had previously exhibited for a “short” vowel, and another student mirrored her with the same gesture. This gesture was, again, a very specialized gesture that the students had probably only been exposed to in this particular course. In relation to Luria’s (1979, 1982) research indicating that a cultural activity such as schooling can alter thought, this metaphoric gesture indicates that these students, from Mexico and Germany, respectively, appropriated not only the gesture, but also a specific way of thinking about vowel sounds in English (see also McCafferty, 2008a).

Furthermore, the students’ acts of mirroring can be a form of internalization with respect to pedagogical concerns in relation to Vygotsky’s notion of how people internalize the world around them. The students were first externalizing it for the possible purposes of internalizing the gesture.

In addition, one student, while giving a speech, produced gestures that the teacher had previously exhibited. The student pointed to her eye when she was explaining what she
had seen on her vacation and pointed to her head when stating the words *think* and *forget*. This may have been due to internalization of the teachers’ pedagogical gestures.

**Pair and Group Work**

Gesture among the students was observed during all instances of pair and group work that occurred during the course recordings. However, the amount of gesture observed in pair and group work was minimal. Also, three instances of mirroring were observed in the data during the segments of the class devoted to pair and group work. One instance involved the teacher mirroring a student, and the other two instances involved only students, although the teacher was talking with one of the pairs when the mirroring occurred (the example discussed above). Interestingly, these three instances of mirroring occurred in the three longest segments of pair and group work that were observed during the course recordings. Of the ten instances of pair and group work, the average length of time that students spent in pairs or groups was just over two minutes. However, in the three instances where mirroring was observed, the length of time the students had to talk together was 3:23, 4:10, and 5:37, respectively. Thus, it appears that mirroring occurred because these instances were those when students were given more than a couple of minutes to work collaboratively in pairs or groups.

**Summary, Limitations, and Pedagogical Implications**

**Summary**

The topic of gesture and nonverbal behavior is one that is only recently being considered in relation to second language learning. The questions addressed in this qualitative study are considered within a sociocultural theoretical framework, focusing on the role of gesture in the mediation of teaching and learning. No specific studies have
thoroughly addressed these particular aspects of gesture use from this perspective, and the answers to these questions contribute to the body of knowledge that currently exists on this topic. Though the focus was a post-secondary English as a second language classroom, the research findings benefit all grade levels, from kindergarten to the post-secondary level.

While the findings of this study must be considered in relation to this particular instructor, the dramaturgical element in this classroom was the component of the observations that was the most striking. The instructor demonstrated the different components of her lessons in a mimetic way to the students as a way of clearly presenting and organizing the information. It was a concretization of the language which is different from teacher talk. It was highly mimetic and included aspects of foreigner talk. However, the term foreigner talk does not accurately define what was specifically observed in the classroom. Therefore, the term teacher foreigner talk is proposed to accurately describe the speech and nonverbal behavior of a second language instructor such as the one observed in the current study.

The particular dance component noted in the classroom observations accentuates the fact that the role of the language instructor is perhaps markedly different from the role of instructors of other subjects. The instructor danced to explain grammar, pronunciation, and lexis and manage the classroom, but elements of American culture were presented as well. In addition, nonverbal behavior in the form of dance ensures the attention and interest of the students, particularly in the case of a night class such as the one in the current study.
The cultural elements included in the instructor’s pedagogy also have important ramifications with regard to direct application to classroom practices. Not all cultures view education as ‘higher,’ and not all feeling is associated with the heart. As shown by Hauge (2000), students can be confused by teachers’ gestures when the gestures have a different meaning in the L1, and teachers are sometimes unaware of the culture-specific nature of the gestures they produce.

With regard to the present study, the instructor’s use of space is a novel observation in the field of second language acquisition in relation to gesture. The orchestration of the instructor’s performance focused on movements and performance spaces as well as focusing on text spaces. In the ecosocial sense, the instructor was creating a space where she reproduced the past in the present, recreating the environment that she was in. This was achieved due to the incorporation of a mimetic quality into her performance.

The instructor’s use of touch was also a very important element of the instructor’s gestures because it was specific to a language classroom. Instructors of other subjects do not generally touch their teeth and throats regularly in the classroom.

The observations reveal a great deal about the instructor’s beliefs on the practice of teaching, the way that she viewed the classroom, and how much gesture played a part in the making of meaning for the students in the classroom. One very important aspect of the current study is that the instructor was aware, to some extent, of the gestures that she used. For example, the instructor was aware that she pointed behind her to indicate the past. While she was not aware of all of her gesture use, which was indicated by the fact that she was unaware of the use of her left hand to gesture, this element of the study is notable because no teachers so far have been shown to be fully aware of some of the
specific gestures that they use. Nardotto Peltier and McCafferty (2010) noted the instructors’ awareness of gesture use was essentially limited to the fact that they were aware that they gestured and that the students imitated them. In addition, in the Lazaraton (2004) study, the teacher was not aware of her gesture use until the researcher pointed out to her that she used a lot of hand gestures. Therefore, this is an interesting foray into the notion that teachers are aware of gestures because of the previous studies which show that instructors are not necessarily conscious of their specific gesture use. This is an area for future research, but it is very important in the current study because the instructor recognized her very specific use of gestures to some extent.

Many teachers assume that their gestures can be understood by students of different cultures and that gestures and nonverbal behavior are the same in all nations. Mistakes have been made by presidents with regard to this assumption, and certainly mistakes are easily made by instructors as well. Students may be hesitant to point out that they are unaware of the meaning of a certain gesture, and they may also be reluctant to indicate that they do not understand what a teacher is trying to explain. Finally, teachers can do more damage than merely falling short of explaining a vocabulary word; they can go as far as offending a student with an obscene gesture.

With many schools and classrooms often consisting of language learners, this dissertation topic is an imperative one. This project gives instructors a better ability to understand how gesture is used in the classroom. From the observations, instructors can better understand the role that gesture has in the pursuit of helping students with their goal of second language acquisition. Knowledge of gesture use puts students in a better position to improve their English ability. Students can learn more, they can learn more
quickly, and they can learn with less confusion and frustration. This research will contribute to an enhanced quality of life for the international community of language learners.

Gesture plays an important role in communication and in second language learning. The lexical and gestural component of ESL instructors’ pedagogy still requires further attention in the realm of second language acquisition research. Even more thorough consideration of the aspects of classroom discourse will provide more insight into the role of teacher and student speech and behavior in the language classroom.

**Limitations**

One limitation in this study is that the observations were only of a single instructor. Since this was a case study of one highly experienced teacher in a beginning-level ESL classroom, extrapolation to other teachers should be done with caution although other studies do confirm some of the behaviors observed. Furthermore, different people gesture with varying frequency. Therefore, other ESL instructors may possibly exhibit similar patterns, but their gesture use would certainly differ from what was observed in the classroom studied. Subject matter (even within the field of ESL) may also affect gesture use in the classroom. Thus, another limitation of this study is that this particular course was a pronunciation and listening course.

**Pedagogical Implications and Future Research**

The results of this qualitative study provide many pedagogical implications for the field of second language acquisition. Though the results of this study are specific to a particular language teacher, the results of this study can be considered in relation to other second language teachers and teaching.
Regarding the specific subject matter of pronunciation, though the phonetic symbols were presented in the textbook, the students were never tested on their recognition of these emblems. If gestures such as these with specific pedagogical functions are used, student recognition of these emblems should be researched.

With regard to other skills related to language acquisition, it is necessary for instructors to be aware of other specific pedagogical functions that are represented with gestures. Teachers should consider their use of gesture in different types of classrooms and how that use affects student comprehension and overall language learning.

Another pedagogical implication is that teachers consider the cultural meanings associated with their gestures and ask students about whether they understand the specific gestures exhibited. For example, in the present study, it would have been beneficial to determine how many students in the class actually understood the instructor’s gesture of pointing behind her to indicate the past. As previously discussed, an interesting future study would be to determine how aware other instructors are of their gesture use.

Furthermore, while students were found to consider gestures beneficial to their language learning, more in-depth, qualitative studies should be conducted with second language students, asking them which gestures in particular they consider to be beneficial. It would also be useful to consider which gestures are explicitly taught in the classroom in relation to second language learning. To what extent can, or should, nonverbal behaviors be taught?

Another implication is the consideration of whether teachers can overuse gestures in the second language classroom, making students over-reliant upon the teachers’ hand and arm movements in order to understand what is being conveyed in a conversation. This
includes teachers slowing their rate of speech and enunciating. When does a teacher need to be ‘authentic’ and when is it necessary for a teacher to make sure students understand what is being said? In other words, under what circumstances can gesture be an aid or a detriment to achievement and comprehension? Would the alteration of the amount of gesture used by teachers result in increased proficiency for adult students learning English as a second language? Is too much gesture use detrimental?

Conversely, is it possible for teachers to not use enough gesture? Gestures are a naturally occurring part of language, and if teachers do not provide students with adequate exposure to gesture, is this a disservice to students as well?

With regard to foreigner talk, when explaining concepts in English to native English speakers, an instructor generally does not expect the students to have trouble with understanding in terms of language. So, for certain explanations, an instructor would probably not resort to the use of gesture and mimesis as was observed in the current study. It might be expected for lexical explanations, but the general expectation with native English speaking students would not be for an instructor to act out nearly every word to the degree as was observed in this study. However, if an instructor were teaching another language such as French, then the instructor might do this with students who are at a beginning level as in the present study.

Finally, another related consideration would be a comparative analysis studying an American teaching a language course, such as French, where an instructor would have no apparent reason to resort to using American cultural gestures so much, but might do so anyway as a part of identity.
The field of applied linguistics would benefit from further study of the role of gesture in the mediation of second language teaching and learning. The current study has been an attempt to contribute to the existing knowledge on this emerging topic.

**Conclusion**

Gesture is clearly an integral part of the language classroom. It cannot be ignored or disregarded. Second language learners clearly receive more than just linguistic input from teachers when in a classroom setting, and gesture is a fundamental component of the input that learners receive.

The primary intention of this study was to review and examine the ways in which gesture is used with language learners and to determine how gesture affects meaning in the second language classroom. Gesture clearly plays a significant role in second language acquisition; however, as indicated in the literature review, the field of second language acquisition would undoubtedly benefit from more studies in this area, and the current study was a particularly necessary one. Gesture is clearly influential in the struggle of students to deal with communicating in a foreign tongue, and further study is warranted.
APPENDIX A
DATA TRANSCRIPTION CONVENTIONS

Oral Data:

…= ellipsis;
<., <., <…>= pauses of different lengths;
<italics>= comment by the transcriber; movement other than gesture by the participants;
<?>= unclear utterances;
(#)word#)= uncertain hearing;
<@>= laughter during speech;
wor- = word truncation;
____ = verbal utterances corresponding to the whole gestural phase.
*= self-interruption;
= = other interruption;
%= nonspeech sound (such as a swallow)

Gestural Data:

[italics]= description of gestures, trajectory, shape, location
LH= left hand;
LHF= left hand forming a fist;
RH= right hand;
RHF= right hand forming a fist;
BH= both hands;
BHC= both hands open, facing each other, forming a half-open container shape;
LPO= left palm open;
LPOU=left palm open, facing up;
LPOD=left palm open, facing down;
RPO=right palm open;
RPOU=right palm open, facing up;
RPOD=right palm open, facing down;
LA=left arm;
RA=right arm;
C-VPT=character viewpoint of an iconic gesture;
O-VPT=observer viewpoint of an iconic gesture
APPENDIX B

STUDENT LIST WITH GEOGRAPHIC MAKEUP AND GENDER

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Country</th>
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</thead>
<tbody>
<tr>
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<td>M</td>
<td>Russia</td>
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<td>b</td>
<td>M</td>
<td>South Korea</td>
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<tr>
<td>z</td>
<td>M</td>
<td>China</td>
</tr>
</tbody>
</table>
APPENDIX C

INSTRUCTOR BACKGROUND QUESTIONNAIRE

1. Which class(es) are you currently teaching?

2. Where were you born?

3. If you were not born in the United States, please indicate the age at which you moved to the United States.

4. What is/are your native language(s)?

5. Please indicate any other language(s) spoken and how you learned each language.

6. Please describe in detail your experience living in other countries. (Please list the countries you have lived in and the amount of time you lived there).

7. Please describe in detail your experience traveling to other countries.

8. Please list your education including major(s). (For questions 8 & 9, please feel free to just attach your CV if it is easier).

9. Please list your teaching experience (include school, years teaching, grade, and subject).

Thank you!
APPENDIX D
INSTRUCTOR FOLLOW-UP INTERVIEW QUESTIONS

1. Have you ever seen yourself on video while teaching? If so, what were your impressions?

2. When you watch these clips, what do you notice about yourself as a teacher?

3. Are you aware that you use gestures as part of your teaching? For what purposes do you use gesture? What are you generally trying to accomplish?

4. At times, it seems like you are performing the language. What do you think?

5. Do you have any thoughts as to why you use your left hand to gesture?

6. What is your theater background?

7. You bring in personal experience and use that to relate to what you are teaching. Are you aware that you do that? Why do you do that?
APPENDIX E

STUDENT FOLLOW-UP SURVEY QUESTIONS

1. Are you aware of the gestures that your teacher uses?
2. If yes, what do you think about the gestures?
3. Are you aware of the gestures that you use?
4. If yes, what do you think about the gestures that you use?
5. Has your current teacher taught you gestures?
6. If yes, which ones?
7. Have you had another teacher teach you gestures?
8. If yes, which ones?
9. How do you feel about becoming like an American by using American gestures?
10. Do you have any other comments about your teacher’s gestures?
11. Do you have any other comments about your own gestures?
12. Would you be interested in talking with me about your teacher’s gestures?
APPENDIX F

MAP OF CLASSROOM

back of classroom

researcher

Teacher counter with computer, document camera, phone, and other technological equipment

whiteboard
APPENDIX G

TRANSCRIPTION OF FIVE-MINUTE CLASSROOM SEGMENT FROM 26:18-31:18

T: So, I’m gonna go sug-,

[RH holding a pen to point to, and write in, the book, which is on the document camera and projected onto a screen at the front of the classroom]

and then this one becomes -gest.

[RH holding a pen to point to, and write in, the book, which is on the document camera]


[RH holding a pen and pointing to the book, which is on the document camera]

So, over here is like

[RH holding a pen and pointing to the book, which is on the document camera]

the schwa.

[RH holding a pen to point to and write in the book, which is on the document camera]

Over here. Suggest.

[RH holding a pen and pointing to the book, which is on the document camera]

Last one. Lettuce.

[RH holding a pen and pointing to the book, which is on the document camera]

Students: Lettuce.

T: Lettuce.

<instructor puts pen down on podium to work the computer mouse, as she plans to begin listening>

Students: Lettuce.

T: Lettuce. Now let’s just listen please.
<instructor’s RH hand on the mouse and LH on podium technology controls>

Sc: Question. Question please.

T: Oh, okay. One moment. I’m working on <.> pause. Wait a second.

<instructor’s hands on the mouse and on podium technology controls>

Sg: Second word.

T: Just a second. <…> Okay. Pause. <.>

<intro music to listening begins, but instructor pauses it>

Question. Yes?

<RH on mouse; LH on book to hold it open>

Sc: Yes, um, how do you say, <.> um…

T: Spell it if you want to.

Sc: No. Pronunciation. Ah. The wor-

T: The pro-nun-ci-a-tion.

Sc: The pronunciation the word uh before last one.

T: Careful. <.> Careful.

Students: Careful.

T: Careful.

Students: Careful.

T: So, the /ə/.

[LH pointing to the book, which is on the document camera]

Careful. It means

[raises LH pointing and shaking index finger]

careful. Be careful.
Students: Careful.

Sg: Um, second word.

T: Second from the last word we just did.

[ LH index finger pointing to the book, which is on the document camera ]

We did lettuce

[ LH index finger pointing to the word lettuce in the book, which is on the document camera ]

and we did careful.

[ LH index finger pointing to the word careful in the book, which is on the document camera ]

Do you have another one?

Sd: Another. Another one.

Sl: With u? Careful is with u? The last?

T: It is. Careful. Let’s look again. Are you not seeing that one? We’ll go back then. All right.

[ LH index finger pointing to the word careful in the book, which is on the document camera ]

St: Excuse me.

[ raises LH to ask a question ]


[ LH index finger pointing to the word careful in the book, which is on the document camera ]

I missed a couple maybe you need. This is <;> careful.
[RH index finger pointing to the word careful in the book, which is on the document camera]

Students: Careful.

T: Careful.

[RH index finger still pointing to the word careful in the book, which is on the document camera]

T: Lettuce.

[moves RH index finger to point to the word lettuce in the book, which is on the document camera]

Students: Lettuce.

St: What is the difference…is suggest?

T: Sug-gest.

Students: Suggest.

St: Suggest?

T: This is uh. Suggest.

[moves RH index finger to point to the word suggest in the book, which is on the document camera]

Students: Suggest.

St: Suggest? Second?

T: Success.

[moves RH index finger to point to the word success in the book, which is on the document camera]

Students: Success.
St: Success. Uh-huh.

T: Uh-huh.

T: So, this one is suc-. And you have like /æ/. Suc-

[picks up pen with RH to point to, and write on, the word success in the book, which is on the document camera]

Then you put a /ɛ/sound.

[picks up pen with RH to point to, and write on, the word success in the book, which is on the document camera]

Suc-cess. Suc-cess. Then you have this one right here. Success.

[picks up pen with RH to point to the word success in the book, which is on the document camera]

<-> All right. Sometimes you’ll even see with a O-U. Fa-mous.

[moves RH with pen to point to the word famous in the book, which is on the document camera]

Students: Famous.

T: /ɔs/. Right here. This is <-> famous.

[moves RH with pen to point to, and write on, the word famous in the book, which is on the document camera]

Students: Famous.

T: De-li-cious. This has two. De-li-cious.

[moves RH with pen to point to, and write on, the word delicious in the book, which is on the document camera]

Students: Delicious.

<clearly articulates>

T: And this, give it a shhhhh.

[moves RH with pen to point to, and write on, the word delicious in the book, which is on the document camera]

Delishhhhiious.

Students: Delicious. Delicious.

T: This has three syllables.

[moves RH with pen to point to the word dangerous in the book, which is on the document camera]

Dan-

[claps BH together]

-ger.

[claps BH together]

Students: Dangerous.

T: /əs/.

[moves RH with pen to point to, and write on, the word dangerous in the book, which is on the document camera]

Dangerous.

Students: Dangerous.

T: Dangerous.

Students: Dangerous.

T: Do you know that word? Dangerous? Okay.
Students: Yes. Dangerous.

T: Okay. <.> Yes. Many times you have /æs/, too. <.>

[raises BH up with palms facing outward; RH holding pencil]

T: What is the difference between…

[raises BH up with palms facing outward, mirroring the student’s gesture]

<instructor walks toward the student from behind the podium>

Sl: …between lettuce

[uses pencil in RH to point to the word lettuce on the screen at the front of the classroom; LH is still at chest level]

and letter?

[index finger of LH and pencil in RH both point to the word letter on the screen at the front of the classroom]

T: Oh. Not the first part. I can show you something <.> if this is what you mean. The first part of your word <.> is <.> the same. L-E-T sound. The second part is where the difference is, and we’re going into those sounds tonight. Example.

<picks up pen with RH and looks for a blank piece of paper>

<…> This one is letter. Okay. Some people change it to /lɛdər/. 

This is lettuce. Oh. This one is letter. Some people change it to /lɛdər/.
<writes the word letter on a piece of paper on the document camera so students can see it on the screen>

Students: Letter.

T: I’m going to write you a letter. Tonight we are going to talk about this sound at the end. /ər/.

<circles –er and writes phonetic symbol for this sound on the paper>

But this word <…> is <.> a little different. Again, go to the -d, and this one is a schwa.

<writes the word lettuce, with a “d” above the “tt” and the phonetic symbol for schwa under the “u,” on the paper so students can see it on the screen>

Lettuce.

Students: Lettuce.

T: Lettuce.

Students: Lettuce.

T: Letter.

[moves RH with pen to point to the word letter on the piece of paper, which is on the document camera]

Students: Letter.

T: Lettuce.

[moves RH with pen to point to the word lettuce on the piece of paper, which is on the document camera]

Students: Lettuce.

T: That’s the difference. Now that you have brought that up,

[moves index finger of LH in a clockwise circle at waist level]
that is one of the things that we are going to study tonight.

If you notice <.> on your paper, it is going to be <..>

right here. <.>

On letter. <@> That’s one of our words today.

Students: Letter.

T: Letter.

Students: Letter.

T: Notice I’m giving the schwa r.

It’s an r-controlled <.> schwa. /әr/. <.>

But before I do that, let’s spend a little more time

I don’t know if it helps you to know what the linguistic term is.

I don’t know if it helps you to know what the linguistic term is.
but when I say  

[RH index finger taps right ear three times]  
schwa,  

[RH forms a c-shape, indicating phonetic symbol for schwa]  
you know I mean /a/. <.>  
<tilts head backward>  

Uh.  

[slightly shrugs shoulders, turns RH palm up, and tilts head to right; book is in LH]  
Sl: The double t, the double t is d?  
T: Yes, this is something that we... It’s a phenomenon in English. <.>  
<picks up pencil and searches for a piece of paper to write on again; places paper on document camera>  
Frequently, when we have two vowels.  
<draws a horizontal line on the paper, separating what she is about to write with what was previously written>  
Okay. I have <...> okay.  
<writes the word lettuce>
<this interview took place in the instructor’s high school classroom after school on September 17, 2010 at 2:00pm>

<R indicates the researcher and Tb was another teacher that the instructor invited into her classroom during a short portion of the interview>

R: So, I’ll just play it for a minute. Have you ever seen yourself on video before?

T: Yes. Not for awhile.

<played clip from Class 3 14:16-15:42 related to grammar>

<instructor laughs twice during the clip>

T: It’s the truth. That’s what you get with kids. They give you like a travel log. I went. I went. I went. They don’t give you any of the deeper things like the five senses and use some other verbs.

R: I really like this.

T: I like it, too. Hey, I’m pretty good. <@> It’s funny. You don’t know how you come across, but yeah, it’s true when you are speaking, and you’re going to tell about something in the past with the past tense. Use sight words, I mean all the five senses, and I’m listening for the vowels. Is there anything that you don’t like?

R: No. No, but what do you notice about it?

T: What do I notice about it? In what respect? Okay, I notice that my students are listening, and they are going to prepare something to speak. I am asking them as I go along if they understand, and it’s showing me that you understand on some levels by giving me a word. I’m using a lot of the things that make our husbands crazy. We do a lot
of this stuff because we are ELL. ESL. That’s what you say [addressed to researcher]. So, I am very Italian when I speak. I think that just comes with the territory from being an ESL teacher for so long, and I enunciate really carefully because this is a pronunciation class.

R: Because that’s what I’m looking at…is all of your gestures.

T: So, gestures and maybe you can even think of the…those other…body…I’m doing gestures with my mouth and pronunciation, eyes, everything. It’s kind of…you have to engage on many levels. Teachers lose them. You know, I’ve actually seen teachers as they’re writing, talking. You can’t talk to the board.

R: Yeah. Exactly. So, in this clip…well, before I tell you too much let me show you another one because I want to get what you think before I tell you.

T: You want this? You want a candy?

R: No, thanks. Thank you though.

<instructor calls another teacher, Tb, who is in the hall, into the room>

T: Tb. Tb.

Tb: Yes.

T: Come here a minute.

Tb: What’s that?

T: Come here a minute.

<Tb comes into the room>

T: He does all of our announcements and stuff. This is my friend, R. This is Tb.

R: Hi.

Tb: Hello.
R: Nice to meet you.

Tb: Hi. Nice to meet you.

T: She’s doing her doctorate work, and…

R: I videotaped her.

T: He’s the king of videos.

<played clip from Class 4 58:40-59:38 related to lexis>

During clip:

T: I forgot I say these crazy things to people.

Tb: What class is it?

T: It’s pronunciation. <in response to her clear articulation in the clip> Because you have to.

After clip: 5:44

T: That’s funny. I got the big old teeth and the lips and the tongue.

Tb: You taped the whole thing?

R: I taped eight classes.

T: I’m going to be immortalized in R’s doctorate degree.

R: I looked at eight classes.

Tb: You have to tape them?

R: I was looking at gestures.

T: It’s funny that you picked me because I am so Italian. He’s Italian. He’s Italian, but I’m such a…

Tb: I think if I had someone come and tape me and watch me I’d hate it; I wouldn’t want to watch it. Because I’d notice things I do like, “Oh, I can’t believe I do that or I do that.”
6:45 T: I like what I’m doing. I don’t like the way I look.  

Typical female. I really do kind of like what I’m doing though. It’s okay. It’s good material. You know, also, in a class like this, I can teach it blindfolded. Sometimes if I don’t have the CD in right or something, I just talk to them. Because when we make a mistake with the pronunciation class is when we get the big tech room. They need to be really close to you. I have a terrible room in <mentions a particular building on campus>. You know how most of those rooms are. It is fine for that class. I just group the tables and chairs all how I want them really close to me, and we work. So, I have a boom box. I don’t have anything. And I know how I cue it for everything. And somehow they mess up. I just know how to do it with them anyway. It doesn’t matter. Certain things you need all that technology, but not that class.

R: It’s just the listening and the CD. So, I put all these gestures into different categories.

T: That’s hard.

R: I know. It took me forever. Obviously. One is grammar. I don’t know if you notice, but you point to the past.

T: For past.

R: For past.

T: I step backwards, too.

R: Uh-huh. So, that was one kind of category…grammar. And another category I put them in was vocabulary. Like the…stuffed. And you did a slip. Like a slip. So, I did a grammar gesture category and that one is, you know, body in addition to gesture. So, that
…vocabulary has that section. And then pronunciation. I brought a clip. I wanted to show you that. That’s a nice one, too. 8:40

<played clip from Class 5 5:15 to 5:40 related to pronunciation>

T: Well, that’s my real mid-west, “Bag.” <@> It’s funny. I have my Korean students say, “Bag.” <emphasizes vowel> It’s funny for them to say it that way. Buckle. Uncle Buckle. <@>

R: So, I put them in pronunciation, grammar, vocabulary, and then there’s another one. It was like kind of management stuff where…I’ve got this one ready, too.

T: I’m so messy looking when I have all that stuff up there. It just looks a little orderly <T meant to say disorderly> That other one…I guess I was in the throes of a lesson. 9:45 I have so much junk.

R: Oh, I didn’t even notice. That’s at the end of the class, too. So…I think this is the stuffed the bag day. No, that was Class 4. Anyway…

T: I have a green shirt in one.

R: Yeah, and it’s nice ‘cause one day you have yellow, and one day you have green. It’s nice because…all the colors. You have black the one day. I think it’s this one. So, this one is…

<played clip from Class 1 17:00-17:35 related to classroom management>

R: So, that was the fourth category that I made.

T: I like them to participate, but they don’t always have to verbalize it. You understand. Yes? I never do that far. [gestures with thumb down] I need more…So, show me that. [thumb in a horizontal position]

R: And they do. I have a student section, too, where they’re doing the same things.
R: All right. Well, let me ask you these last couple questions. **So, what’s your theater background?**

T: Did you know that I had a theater background?

R: No, I don’t, but just from here…

T: Oh, okay. I had wanted to be an actress, and I had…in high school, I would go downtown at night, taking the bus to Milwaukee school, Milwaukee Conservatory of Acting. I had Eugene Lesser and Erica Slazick, Walter Slazick’s daughter, the big director. They were at the conservatory. So, I did think about going into acting. I have my portfolio and all. When I came here, I had thought I wanted to dance. And I wasn’t tall enough to be a nude. And I wasn’t good enough to be a principal. So, then I did take acting. Just like you know, community acting and stuff. In high school, I did some things. So, I thought about that. I also wanted to be like broadcast journalism, but in my day if you said you loved to go to different places…I wanted to be like Christian Amanpour or Diane Sawyer. ‘Oh, you like to go to different places in the world or you like to work with people, you should be a teacher.’ They told all of us to be teachers or nurses. And probably I am good at being a teacher, but that would have been something fascinating. So, I always traveled a lot and went to school. Different countries. So, teaching gives you that opportunity to be on stage a bit. So, I get my ya-ya’s that way.

R: I just had a feeling.

T: Yeah, I thought about being an actress. I considered it. Then I didn’t go to Hollywood. I ended up here. So, then it was gonna be more of a dance thing, but truth be told, I’m not
that good. I went to *<says the name of a dance studio>* and stuff like train with all the dancers.

**R:** Also, too, you use your left hand when you’re gesturing a lot, like more than would be expected, and my thought on it was maybe because you are used to having…

**T:** Writing tools. That would be it. You are right on. I use my left because my right is probably using something to do writing.

**R:** But even if you don’t have something in your hand, I think that’s kind of carried over.

**T:** Probably. After 27 years of teaching. Actually, I say 27, but it’s more. I have 27 years in this school district, but I started in 1972 in Wisconsin. So, it’s, you know…Golly. A lot of years.

**R:** So, that’s 38.

**T:** And your training before that. I’ve actually been in the teaching field like 40 years.

**R:** That’s a long time.

**T:** It is. So, I’ve probably always had something to write with in this hand. That makes sense. I’ve never thought of that. That’s funny. I never, ever thought of that.

**R:** Well, I think that’s all. So, you know. You recognize that you are…’cause usually people they don’t, they are not conscious of their gestures, but you are.

**T:** I probably use them so much. I want to use them, and I have been teased about it a lot. *<emphasis on want>* I’ll come home and, ‘Sit down if you want to eat.’ [gestures with both hands palms open to a seat] And, ‘Stop that. <@> Stop that now. Talk to me. You don’t have to go on like that.’

**R:** So, when I actually finish…
T: Well, I’m flattered. I’m flattered that you chose me, and I am kind of like…I think it’s kind of an honor. So, I mean, wow. You liked me.

R: Well, it was never a point of let’s see who’s a good teacher or who’s a bad teacher.

T: You were looking for specifics.

R: My research question really is videotaping your class and just seeing what patterns of gesture are there.

T: Right, it doesn’t mean that they are effective or not. Did you explore that aspect of it?

R: No. This is more of an observational…it’s not really to make a conclusion necessarily.

This is what’s happening in the classroom with the gestures. 35:00

<The remainder of the interview is omitted as I explain the research to her.>
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VITA

Graduate College
University of Nevada Las Vegas

Natalie Hudson

Degrees:
Bachelor of Arts, Integrative Biology, 1995
University of California Berkeley

Master of Arts, Education, 2002
University of Nevada Las Vegas

Special Honors and Awards:
UNLV Division of Educational Outreach Renee and Martin Paluga Scholarship, 2011
UNLV Graduate and Professional Student Association Travel Grant, Spring 2011
UNLV Graduate College Access Childcare Scholarship, Fall 2010
UNLV Graduate and Professional Student Association Travel Grant, Fall 2010
UNLV Graduate College Summer Session Scholarship, 2010
UNLV Marjorie Barrick Fellowship Finalist, 2010
CATESOL Rick Sullivan Award, 2010
UNLV Graduate College Childcare Scholarship, Spring 2010
UNLV Academic Success Center Friendship Re-Entry Scholarship, Spring 2010
UNLV Graduate and Professional Student Association Travel Grant, Spring 2010
UNLV Graduate College Childcare Scholarship, Fall 2009
UNLV Academic Success Center Friendship Re-Entry Scholarship, Fall 2009
UNLV Graduate and Professional Student Association Research Grant, Fall 2009
UNLV Graduate College Summer Session Scholarship, 2009
UNLV Jean Nidetch Women’s Center Friendship Re-Entry Scholarship, Spring 2009
UNLV Graduate and Professional Student Association Research Grant, Spring 2009
UNLV Jean Nidetch Women’s Center Friendship Re-Entry Scholarship, Fall 2008
UNLV Graduate and Professional Student Association Research Grant, Fall 2008
UNLV GREAT (Graduate Research Training) Assistantship, 2008
UNLV President’s Graduate Fellowship Nominee, 2008

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Dissertation Examination Committee:
Chairperson, Steven G. McCafferty, Ph.D.
Committee Member, Thomas W. Bean, Ph.D.
Committee Member, Shaoan Zhang, Ph.D.
Graduate Faculty Representative, LeAnn G. Putney, Ph.D.