A Thesis

entitled

Relative distance and the use of ‘this’ and ‘that’ and possible deictic response

by

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Submitted to the Graduate Faculty as partial fulfillment of the requirements for the

Master of English Degree in English as a Second Language

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Previous studies have been done on the use of ‘this’ and ‘that’ by native speakers (NSs) of English, non-native speakers (NNSs) of English or foreign language speakers (FLSs) by Kelly-Lopez (2005), Esseili (2006), Hickman (2005), and Imai (2003). Although the first three studies were very well thought out they were missing one point that Imai had. But as Esseili points out in her thesis, Imai’s research was flawed because he told his subjects what he was looking for. I want to re-do his test but remove the bias from the study to see if the presentation of objects would be more likely to elicit ‘this’ for near objects and ‘that’ for objects that are farther away from the subjects. In the current study four identical objects will be presented to subjects aligned at equal distances on a flat plane going away from the subjects on a mat, either on a table or on the floor. They may or may not be able to touch the items they are referring to. This will allow the researcher to see if the relative distance from the subject is important or not in the use of ‘this’ and ‘that’ and if Imai’s “contact/control” theory is valid (Imai, p. 135).

Affective distance of all objects presented horizontally to the subjects has been proven to have the same effect on the choice of ‘this’ or ‘that’, whether closer or farther from the subject. Using NSs and NNSs of English, I plan on testing relative distance of
the same types of objects, set up on a table or on the floor, so that one object is closest to
the subject and the following items are spaced on the axis so that the final object
presented is completely out of the subject’s physical reach. I feel that this presentation
will elicit the desired response of ‘this’ and ‘that’ along with other possible deixis
responses from the subjects. I would ask the subject in random order which item is first,
second, third, and fourth. I also will use the survey provided by Christman for the
assessment of handedness to check if handedness has a possible impact on the physical
responses by the subjects.

If the responses are as expected then it would show that relative distance does
have an effect on the selection of ‘this’ and ‘that’ of the items presented in a straight line
going away from the subjects by NSs and NNSs. The opposite could also happen where,
same as affective distance, there is no difference between the use of ‘this’ and ‘that’ and
if there is a difference between NSs and NNSs.
Acknowledgements

I give thanks to God for helping to make everything possible in His time.

Thank you to my family, for my husband, Eric Lewinski, my rock and help-mate who got me through many a tough time during this process. “Here Comes the Sun!” To my son Nathan Lewinski who gave up lots of mommy time dealing with me not being around all the times he would have liked and for being a wonderful linguistic study tool while learning to speak. “You Are My Sunshine!” To my mom and my sister, Marilyn and Laurie Overholt, who have been there since the beginning.

I would like to thank my advisor Dr. Douglas W. Coleman for guiding me in this process a long way from where we started and helping me to want to continue my research in other areas of this field. To Dr. Melinda Reichelt, Dr. Douglas W. Coleman and Dr. Heather Blakemore for making this journey more fun than it should have been. It is rare that you get the opportunity to work with a wonderful team of professors. I also whole-heartedly thank my “Team Sandy” members Dr. Douglas W. Coleman (chair), Dr. Stephen D. Christman, Dr. Paul A. Fritz, and Dr. Sumitra Srinivasan, thank you for believing enough in my project to become members of my committee.
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Chapter 1

Introduction

Definitions of ‘this’ and ‘that’ in dictionaries for English language learner’s

Some common definitions of the terms ‘this’ and ‘that’ in dictionaries for English language learners are pretty concrete in their meanings. In *Longman Dictionary of Contemporary English* (1987 edition) ‘this’ is defined “1. Being the one of two or more people or things that is nearer in time, place, thought, etc.:” (Longman, p. 1104), and ‘that’ is defined as “2. being the one of two or more people or things that is further away in time, place, thought, etc.” (Longman, p. 1096). According to *Heinle’s Basic Newbury House Dictionary of American English* (2004) ‘this’ is defined as “referring to something close by” (Heinle, p. 449) and ‘that’ is “referring to something or someone specific (but not nearby)” (Heinle, p. 447). As we can see by these examples, dictionaries define ‘this’ and ‘that’ when referring to objects or people as a deictic function in the English language. This is how dictionaries and theorists want us to believe that it is distance related to how these terms are used, but in everyday interactions we use these terms quite differently.

These definitions are not the full scope of definitions that are available to the English as a Second Language (ESL) student. There are applications for smartphones and online dictionary resources that are available as well. They also receive information as to the “proper” use for words from other students and native speakers of the language as well. This can also lead to confusion in the language learner’s idea of how to sound like a native-like speaker of English which is the goal most programs strive for. As instructors of ESL we make presumptions that we are using language in a natural way. We teach Non-Native Speakers of English (NNSs) definitions of words and model their
usage thinking that we are using native-like vernacular. Sometimes the meaning of the words we provide to our students fall into a gray area that meaning does not match how we use the language.

Bloomfield, points out that the “study of speech-sounds without regard to meanings is an abstraction” (Bloomfield, 1933, p. 139). But this does not clearly show how meanings of words can affect the speech of our students. We have to look at the definitions that we provide our students and how we model them to really see if what we teach is what Native Speakers (NSs) actually do in everyday interactions. Instead of looking at meaning we need to take a different approach such as the one that Yngve (1996) proposes for the study of communication called Hard Science Linguistics (HSL) or Human Linguistics. Yngve (1996) further states that “real-world objects are available to us for scientific study such as sound waves and the people who speak and understand” (Yngve, p. 1). When we study people interacting and the energy flow of a conversation then we can see what everyday speech really is like and how the meaning of the hearer and speaker is not always the same.

In an unpublished study on deixis, Kelly-Lopez tried to show in her work how English was used when related to the traditional definition of ‘this’ and ‘that.’ This study was inconclusive as to which was used and showed that these two terms were used interchangeably. This compelled Kelly-Lopez to study this further as to the affective preference of ‘this’ and ‘that’ (Kelly-Lopez, 2005, p. 7). In her first study no data was collected regarding NS and NNS status so she chose to revisit this study regarding NSs and NNSs to test if the linguistic properties were the same for each group (Kelly-Lopez, 2005, p. 7). Kelly-Lopez showed that there was a significant difference between NSs and
NNSs when they used the deictic response of ‘this’ and ‘that,’ with NNSs following the more traditional definitions as found in printed dictionaries (Kelly-Lopez, p. 28). I want to add how subjects utilize handedness in their use of ‘this’ and ‘that’ and if this may make a difference in how NNSs are taught to use the terms as related to deixis.

**Relative Distance & Contact/Control Theory**

Contact/control theory is how Imai (2003) believes we use deictic forms when referring to people and objects that we can and cannot touch or relative distance. He states “The most dominant parameter, the speaker’s [contact/control], indicates the importance of the speaker’s interaction with the referent/region.” Imai (2003) states whether a speaker can conceptualize that they can control a referent or region decides what special deictic forms the speaker will use (Imai, p. 5). He further states, “It suggests that the speaker’s conscious interaction with the referent/region primarily conditions the use of deictics” (Imai, 2003, p. 167). For Imai relative distance is challenged by proposing that a speaker determines their space by judging if a referent/region is in their territory or not (Imai, p. 4).

Imai supports his theory of contact/control through his 2003 study of spatial deixis and declares that the “primary and universal parameter for spatial demarcation is the speaker’s [contact/control]” (Imai, p. 170). He continues to state that relative distance is only a cue for determining the territory of the speaker but this can be overridden by “the more decisive [contact/control] parameter” (Imai, p. 170). He avers that the parameter of [contact/control] is dominant than the more traditional theory of distance as related to deictics (Imai, p. 167).
Esseili in her 2006 study shows Imai’s 2003 study is flawed. First she suggests that the labeling of the location of cups on the table as one that would lead the subject to naturally use the location marked and not the proximal or distal forms for the language (Esseili, p. 14). Second, Esseili points out that the subjects were told to use the distal form when he wanted them to use it and not to use the proximal form (Esseili, p. 14). Third, Esseili states that “Imai coached the subjects, “led them,” to use the form that he wanted them to use” creating an unnatural framing for the subjects use of gesture (Esseili, p. 15).

Study of Relative Distance

Esseili’s observations of Imai’s (2003) flawed study, her own study, and the studies of two other graduate students from the University of Toledo have made clear that the studies they performed were incomplete. Since Hickman (2005), Kelly-Lopez (2005), and Esseili (2006) concentrated on absolute distance in their studies the full use of ‘this’ and ‘that’ was not looked at. Kelly-Lopez (2005) showed apples of differing affective appeal but focused on absolute distance over relative distance. In the studies by Hickman (2005) and Esseili (2006), they presented to their subjects various items, either closer to the subject or to the researcher, but lined up side by side at the same distance to the subject at an absolute distance and asked which one they liked best or least, which looks more closely at affective distance which is emotional. This does not fully test the true distal and proximal uses of ‘this’ and ‘that’ leaving relative distance un-tested. It was clear that relative distance was not looked at in their studies and would need to be looked at more closely to determine if there is a correlation to the use of ‘this’ and ‘that’ and relative distance.
Even Imai’s “cup study” looked at absolute distance although he thought he was testing relative distance and the ensuing result is flawed due to the requirement of the subjects to specifically use distal or proximal forms when referring to objects. The bias needs to be taken out of the study and performed with the subject having no prior knowledge of what is really being tested.

One of the things that go hand-in-hand with deictic responses is gesture, touching, or pointing, Yngve (1996) shows through Hard Science Linguistics, these channels are directly related to the speech act in the linkage between two participants. This is one of the reasons that Imai possibly came up with his flawed concept of contact/control but leads me to ask if handedness is important when referring to objects being tested and how NNSs learn the use of the two terms.

Using Yngve’s (1996) framework for Hard Science Linguistics I wanted to take another look at the use of ‘this’ and ‘that’. He states that linguists should study people in real world situations communicating. Through their observations the linguist is to come up with a testable hypothesis. The data is collected in real situations, and not data made up by the scientist, make it an actual scientific experiment that can be tested over and over. Saussure (1959) states in his Course in General Linguistics, that “language is not an entity it exists only within speakers” (Saussure, p. 5). Esseili (2006) states that,
“language is an abstract system that has no tangible reality. Its long established components – semantics, syntax, morphology, and phonology – are also not real and they cannot be observed” or listened to, the only real aspect is phonetics, and the phonetic output of a participant in a linkage, or what we hear (Esseili, p. 4). Yngve goes further in explaining this observational phenomenon that occurs. In From Grammar to Science he points out that Twaddell (1935) shows that the phoneme is a convenient fiction (Yngve, 1996, pp. 87-88). He further states that the false assumptions in linguistics was continued in the discipline for lack of a better understanding and encouraged the flawed model in phonology (Yngve, p. 88). To eliminate the problem, “new foundations have been developed that adhere only to the criteria and assumptions that have been standard in science since Galileo’s time” and make it possible to make linguistics a viable science (Yngve, p. 88). Since this is the case we cannot study the words, phonology, or the abstract, but the real interaction between people to come up with the data that we need to make proper inferences.

With information on handedness, provided by Dr. Stephen Christman, I wanted to confirm whether there was a relation to handedness when referring to an object and if ‘this and ‘that is directly related to which item is referred to. In the 2009 study by Kempe, Brooks, and Christman, there was found to be a clear advantage to language learning when the subject was inconsistent in their handedness (Kempe, Brooks, & Christman, 2002). This handedness difference was interpreted as reflecting inconsistent-handers’ greater functional access to right hemisphere processing, as the right hemisphere has been specifically implicated as playing an important role in early stages of language acquisition. This psychological approach is directly related to linguistic competence and
shows that there is a direct correlation to language use and handedness and the success of NNSs in grasping this concept.

Knowing these things, I want to know:

- Does relative distance plays a role in word choice when referring to objects lined up in a vertical manner away from the subject either on the table or the floor?
- Do subjects touch, point, or make a gesture toward an object they are referring to it (deictic response)?
- Do the definitions that are taught in the ESL classroom really match up with how native speakers really used the words ‘this’ and ‘that?’
Chapter 2
Methodology

Description of Background research

During a lively debate, in an Applied Linguistics II course at The University of Toledo, on the use of ‘this’ and ‘that’ and the following discussions of the research methods of previous students at The University of Toledo, the researcher decided to study this topic further. Looking at the research by former graduate students, especially focusing on the research by Fatima Esseili (2006) and Catherine Kelly-Lopez (2005), there was a feeling that the testing was not focused in the right direction and needed to be studied further to see if past claims about ‘this’ and that’ are correct. The previous studies, by Esseili and Kelly-Lopez, both present items equidistant linearly in a horizontal manner on a table, either closer to the subject or closer to the researcher, (see Figure 1 in the previous chapter) this does not replicate the normal prescriptive use of the terms being tested for relative distance but looks more closely at affective (emotional) distance of the items presented as well as absolute distance (either closer or further) from the subjects, therefore removing the bias that Imai introduces in his studies.

In Kelly-Lopez’s 2005 study of the use of ‘this’ and ‘that’ she first mentions an unpublished study that was undertaken by Kelly-Lopez, Hickman, and Esseili in an Applied 1 Linguistics class at the University of Toledo. In this initial study three sets of objects were presented to subjects: four plastic animals, four different colored blocks, and four same colored blocks. The subjects were asked “Which one of these do you like best?” (Kelly-Lopez, pp. 9-10). Presented with animals subjects most often referred to them by name: seal, tiger, monkey, or alligator. When changed to colored blocks the subject referred to the color: yellow, green, red, and blue. The interesting responses came
when presented with identically colored blocks. If a verbal response was given along with a variety of other responses, ‘this’ occurred only 17.4 percent of the time and ‘that’ 23.9 percent (Kelly-Lopez, 2005, p. 12). These responses were used, almost interchangeably (Kelly-Lopez, p.11).

Kelly-Lopez was intrigued by the results and wanted to see if the difference was in the appearance of, or affective (emotional) response, to similar items. Kelly-Lopez used for this study two 8 ½”x 11” sheets of paper with eleven pictures of apples on them (Kelly-Lopez, 2005, p. 17). Some of the apples were appealing, while others were worm-ridden or rotten. The subjects were then asked “Which specific apple do you like best?” and “Which specific apple do you like least?” with responses recorded after each answer (Kelly-Lopez, p 18). As in the previous study, the pictures in this were presented in an absolute manner not really testing the variable for relative distance. In her results she found that NSs and NNSs utilized speech response pairs of ‘this’ and ‘that’ in different ways not following the predicted traditional definitions presented in dictionaries (Kelly-Lopez, p. 28). Using this information it appears that becoming a ‘native-like’ or ‘near-native’ speech is not realistic for our ESL students when they are being taught an incorrect rule for the terms in ESL classes (Kelly-Lopez, p. 30).

In Esseili’s (2006) research of Arab and Arab Americans, three sets of objects were presented to her subjects lined up on a table in a horizontal manner, either closer to the subject or closer to the researcher. Each subject was asked in Arabic “’ayya gharad biy’jbak(bik) aktar shi? (which object to like you [mas./fem.] the most) ‘which one of these objects do you like the best?’ and ayya gharad biy’jbak(bik) aqal shi? (which object to like you [mas./fem.] the least) ‘which one of these objects do you like the least?’”
(Esseili, p. 24). It was recorded if the subject answered with *hāda* or *hādāk* in their response. *Hāda* is translated as ‘this’ and *hādāk* is translated as ‘that’ in Arabic/English dictionaries. As illustrated in Table 1, the results showed that there was not a significant difference in the use of *hāda* or *hādāk* in their responses, with none of the Arabs using the term Arabic term *hādāk* (Esseili, p. 31). One of the striking features of this study was noting that Arabs tended not to give a verbal response but would point or move to touch the objects being referred to no matter the distance or barrier (table) between themselves and the object.

Table 1: Identical objects: verbal responses of Arabs and Arab Americans

<table>
<thead>
<tr>
<th>Status: Arab</th>
<th>Count</th>
<th>% of Total</th>
<th>color</th>
<th>hada</th>
<th>hadak</th>
<th>none</th>
<th>position</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arab</td>
<td>2</td>
<td>3.8%</td>
<td>15</td>
<td>28.3%</td>
<td>.0%</td>
<td>0</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Arab American</td>
<td>1</td>
<td>1.9%</td>
<td>4</td>
<td>7.5%</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>5.7%</td>
<td>19</td>
<td>35.8%</td>
<td>9.4%</td>
<td>7</td>
<td>35.8%</td>
<td>19</td>
</tr>
</tbody>
</table>

The unpublished study by Hickman, Kelly-Lopez, and Esseili (2005), Kelly-Lopez (2005), and Esseili (2006) all attempt to remove Imai’s flaws from their research but fall short in one area. They are all looking at absolute distance and not relative distance. Even Imai’s contact/control theory is based from the absolute distance from the subject that changes ‘this’ to ‘that’. This leads to the construct of the current research.

**Description of the current research**

After hearing about the previous research of other Graduate Students in the English as a Second Language program at the University of Toledo I was curious if every aspect was being tested. I felt that there was an angle that was being missed.
For the current research I tested 48 subjects acquired from the Psychology subject pool at The University of Toledo. The subjects were male and female students 17 years and older who were native or native-like English speakers. Playing cards were used to create a table for random selection of table or floor and the order that the four questions were asked. Each subject was asked to look at four markers, the markers on the mat were arranged in a straight line oriented perpendicularly to the observer’s perspective, on a mat (towel) randomly placed on a table or on the floor. Most of the markers on the table were easily accessible to the subjects and all of the markers on the floor were not. This tested relative distance as well as Imai’s theory of contact control.

Figure 2: Markers presented on the mat
The same four questions were asked of each subject in different order according to the chart created by the researcher. These questions, only seen by the researcher, are:

1. Which is the closest one?
2. Which is the second closest one?
3. Which is the second farthest one?
4. Which is the farthest one?

If no verbal response was given the subject was prompted with the question “Which one?” to try to elicit a verbal response. All verbal and non-verbal data were noted by the researchers as well as what hand was used.

![Diagram of a table with objects on a mat, a researcher, and a subject with labels for Floor, Objects on mat, Researcher, and Subject.]

Figure 3: Presentation on the table
After the initial questions were asked each subject was presented with a handedness inventory (see Appendix B) provided by Dr. Christman to determine whether or not they were consistent or not consistent in their handedness. As an instructor of American Sign Language what hand is predominantly used by my students and subjects is of extreme interest and how this plays into student learning of a second language. When looking at handedness I am looking as what hand is preferred by the subject the majority of the time and which hand they primarily use for everyday tasks. When scoring the surveys an average of the total scores is used to determine if a subject is strong-left hand or strong-right hand (Consistant Handers CH), or mixed-handed, showing no strong preference to the left or right hand (Inconsistand Handers ICH) (Prichard, Propper, & Christman, p. 3). This looks at the degree of handedness and not the direction (left or right) as previous studies have done (Prichard, Propper, & Christman, p. 3). Scores in the EHI (Edinburgh Handedness Inventory are figured as -100 (pure left-handed) to 100 (pure right-handed) with the majority of the population falling in the 80 range (either plus
or minus) (Prichard, Propper, & Christman, p. 3). In the work of Prichard, Propper, and Christman there are many studies that show the superiority of ICH, with language being one. These studies show that language learners who are ICH have an advantage and that they are more able to internalize the use of everyday language whether it is consistent or not and are more flexible in their language learning.

**Data collection**

For the collection of data for each subject there were three main areas I looked at. First was the verbal response, second was non-verbal response, and third was locus. For verbal responses, deictic speech indicators, I coded the responses as *‘this’, ‘that’, ‘other’,* or *‘none’*. For non-verbal responses it was noted which hand was used and what type of gesture, touching or pointing. The gestures were coded as *‘touch’, ‘point’, ‘other’,* or *‘none’*. Finally the locus of the response was coded if it was in relation to the speaker (first/in front of/closest/last…) or in relation to location (Chair/south/filing cabinet/another objects in the room…) and coded as *‘yes’* or *‘no’*. Some of the responses for locus fit both relation to subject and relation to locus since subjects could have both verbal responses of relation to speaker or to a location for each marker. For example, the response “The very first one at the bottom” fits coding it in relation to the speaker and in relation to locus.

My null hypothesis is that when presented with objects lined up perpendicularly to the subject there would be no difference of the use of ‘this’ and ‘that.’ The alternate hypothesis is that when objects are lined up perpendicularly to the subject there would be more responses of ‘this’ for the item that is closest to them and ‘that’ for the item that is furthest. A secondary null hypothesis is that items would be touched even if out of reach.
(contact/control) of the subject. The secondary alternate hypothesis is that no items would be touched when outside of the subjects reach (contact/control).
Summary of Findings

The results are very intriguing. ‘This’ responses were not expected for anything but markers that were closer to the subject, with marker one being the closest, and ‘that’ was expected for items that were farther, with marker 4 being the farthest. It was not expected that the two terms would be used interchangeably, as Kelly-Lopez (2005) and Esseili (2006) found in their studies, but something closer to the definitions used to teach English learners would be used in a consistent manner. For contact/control theory to be true, there were to be no ‘this’ responses for markers that were presented on the floor.

Table 2: Total responses for each marker on floor and table

<table>
<thead>
<tr>
<th>Total Responses (n) = 48</th>
<th>This</th>
<th>That</th>
<th>Other</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker 1</td>
<td>23</td>
<td>4</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>Marker 2</td>
<td>15</td>
<td>6</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>Marker 3</td>
<td>6</td>
<td>11</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Marker 4</td>
<td>1</td>
<td>10</td>
<td>36</td>
<td>1</td>
</tr>
</tbody>
</table>

As Table 2 shows, the number of ‘this’ responses decreases the number of ‘that’ increases as distance becomes greater, from marker one to marker four, which was expected. What is the most remarkable data are the other responses given by subjects. When not led to give a specific type of response, the subjects tended to use responses that were not expected. Some subjects used responses that used the subject’s position as
locus, “the one in the back” and others used a locus in relation to something located in the room or its location, “the most north.” One subject was specific in lining up the markers with a cabinet and the researcher’s wheelchair, of which the researcher was not currently using, in the room being specific as to which end of the cabinet and which wheel on the chair each marker lined up with. One of the most surprising answers was that there was no marker that was second to the last. The question “Which is the second to the last?” was asked of the subject as their second question. The response really surprised the researcher but no prompt was given to elicit another type of verbal response since this was the original response given.

Table 3: Responses by location: for table and floor for Marker 1

<table>
<thead>
<tr>
<th>Marker 1 totals</th>
<th>(n) = 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>This</td>
</tr>
<tr>
<td>Table</td>
<td>15</td>
</tr>
<tr>
<td>Floor</td>
<td>8</td>
</tr>
</tbody>
</table>

The idea that ‘this’ would be used only when referring to markers that are closer to subjects and ‘that’ for markers farther is not true, thwarting contact/control theory and thereby not supporting Imai’s (2003) claims that this is the case (see Table 3). There is an observable difference in the amount of times that ‘this’ is used for items closer to the subject, but the amount of other responses for Imai’s Contact/Control theory to be true there should be no ‘this’ responses to items presented on the floor which should be outside of their contact/control range due to the inaccessibility of the items. Esseili
(2006) also supports the claim that contact/control is not a valid theory with her study of Arabic speakers and their constant breach of contact/control with subjects getting up to touch items that were out of their reach (Esseili, pp. 26-28).

As Figure 5 shows the relative likelihood of ‘this’ compared to ‘that’ appears to go down as the distance increases, whether the marker is on the table or the floor. It also
shows (definitivey) that ‘this’ occurs frequently even when the marker is on the floor and contact control should not apply.

The findings of handedness are not remarkable. People are either strong-handers (strong-right or strong-left) or mixed-handers and it was assumed that subjects will use their strong hand in their choice when referring to objects. Strong-handers will predominantly use their strong (dominant) hand when referring to objects but mixed-handers use whichever they want. The subjects in this study were no different and how they used their hands to markers being referred to following the information in the Edinburgh Handedness Inventory (EHI) provided to me by Dr. Stephen Christman. The population, as a whole, is half strong-handed and half mixed-handed with a median score being around 80. The majority (n=30) of the subjects were mixed-handed, with the remainder (n=18) being strong right-handers. No data was collected if the subjects were foreign language learners, their grades, and what their handedness inventory could show if subjects who were mixed handed are able to grasp new concepts in foreign language learning. It is unclear if Esseili collected this information in her 2006 study and would be a suggestion of further study as this may directly relate to the way that NSs and NNSs use a foreign language.

Implications for ESL & suggestions for further study

As these finding relate to ESL education it is clear to see that what we teach English language learners is not native-like in usage. Dictionary descriptions do not clearly define what is going on in everyday usage of ‘this’ and ‘that’ and we need to be careful in the use of these definitions as we assume they relate to relative distance. Also mixed-handers that are learning these concepts may be able to grasp NS usage of these
easier than strong-handers. This may be inherently true for any language learning that one ascribes to including signed languages and will come out to be proven or disproven with further study.

Imai’s (2003) theory of contact/control is not a valid. As Esseilli (2006) points out, the flaws in his research do not substantiate the claim of a contact/control parameter. As the findings of this study show, the responses we have, as users of English, are not the prescriptive ones that we think we use as defined above. It appears that we use something else to decide what our word choice will be. It is also very apparent that the choice of ‘this’ versus ‘that’ is not rule-governed, but a probabilistic phenomenon.

In order to fully understand what is going on with peoples understanding of the use of ‘this’ and ‘that,’ we need to study this further with a larger sample size. It may also be interesting to add eye-gaze to see if there is a way to gauge if eye direction may play a role in the decision making process. Finally, bringing NNSs into the design may help to determine if they are truly learning how to use the language in a natural way or simply following the prescriptive rules they are taught.
References


Hickman, Torey. (2005) This and That: spacial vs. attitudinal reference. (Unpublished master’s thesis). The University of Toledo, Toledo, OH.


Kelly-Lopez, Catherine. (2005). The reality of This and That. (Unpublished master’s thesis). The University of Toledo, Toledo, OH.


Appendix A

List of Dictionaries


# Appendix B

## Handedness Inventory

Please indicate your preference in the use of hands for each of the following activities or objects by placing a check in the appropriate column.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Always Left</th>
<th>Usually Left</th>
<th>No Preference</th>
<th>Usually Right</th>
<th>Always Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drawing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spoon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Jars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toothbrush</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Throwing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comb Hair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knife</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Striking a match</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Is your mother left-handed? __________
Is your father left-handed? __________
Do you have any brothers or sisters who are left-handed? __________
Are you male or female? M  F
Appendix II continued:

Citation:


Scoring instructions:

Each response of “Always Left” is worth -10 pts.
Each response of “Usually Left” is worth -5 pts.
Each response of “No Preference” is worth 0 pts.
Each response of “Usually Right” is worth +5 pts.
Each response of “Always Right” is worth +10 pts.

Scores can range from -100 to +100.

To distinguish between strong- and mixed-handers:

The distinction between strong- and mixed-handedness is based on a median split of the absolute values of the handedness scores, such that around half of the population is classified as “strong-handed” and half as “mixed-handed”. The median handedness score in the overall population is around 80.

For raw values:
Strong left-handedness: scores of -85 or lower
Mixed-handedness: scores between -80 and +80
Strong right-handedness: scores of +85 or higher

For absolute values:
Mixed-handedness: scores between 0 and 80
Strong-handedness: scores of 85 or higher

To distinguish between left- and right-handers:

Left-handedness: scores of 0 or below
Right-handedness: scores above 0.