Pronunciation Differences of L2 Spanish Speakers between Meaning-Focused and Form-Focused Tasks

Mike Olsen
LING 2146
April 30, 2009

1. Introduction

The investigation of morphological and syntactic acquisition has largely overshadowed the study of second language (L2) acquisition of phonology (Pennington, 1992). This is evident by the miniscule amount of space that phonology acquisition is given in Rod Ellis's comprehensive book on second language acquisition (SLA) (Ellis, 2008). Although this is the case, Ellis does mention that researchers have recently given more attention to the SLA of phonology and other aspects of SLA such as pragmatics, vocabulary, and social interaction.

Ellis (2008) states that the research involving L2 phonology has been experimental in nature and that there are many hypotheses that researchers have tested. Many of the recent studies have collected data in a laboratory setting (e.g., Best, McRoberts, & Goodell, 2001; Brown, 1998; Colantoni & Steele, 2008; Escudero & Boersma, 2004; Face, 2006; Llama, Cardoso, & Collins, 2007) which allows for the measurement of acoustic parameters that would be difficult to gather in free naturalistic speech. The laboratory setting offers the ability to control variables such as vowel quality in synthesized speech as well as background noise, which may influence perception. On the other hand, laboratory approaches arguably do not allow for the production of natural speech, which may differ invariably from the type of speech elicited in a laboratory experiment (Zampini, 2008).

One of the possible concerns that may arise in laboratory experiments is that participants have the ability to elicit the use of their monitor (Krashen, 1981) because they are able to focus on phonological forms. The use of a linguistic monitor predicts the production of more accurate speech than is found in a more naturalistic setting where a

focus on meaning is much more important. Zampini (2008) also mentions that the awareness of recording instrumentation may cause participants to be more careful in their pronunciation, which may not be evident in speech where participants are focusing on conveying meaning.

Tarone (1979) also discussed the problems that have existed in the field of SLA regarding the reporting of "vernacular speech" when perhaps the task that elicited this speech was very structured and probably actually elicited a more careful style. Tarone claimed that interlanguage varied depending on what task and situation learners faced and that this variation was not dichotomous (between careful and vernacular), but that it was continuous. As such, the type of task used to elicit data should be well defined so that readers can understand exactly what kind of speech was actually elicited. Tarone also provides suggestions on how a more "vernacular speech" can be elicited. Among other suggestions, recording participants in informal contexts such as in the kitchen or on the floor playing with children; using peer group interactions rather than a one-on-one interview; and using topics that deal with emotions such as births, fear, and relationships lead to a more natural speech which focuses on meaning.

Although the community of researchers investigating L2 phonology acknowledges the above-mentioned issues, to my knowledge, there has been no attempt to empirically observe and describe the differences in pronunciation when learners focus on phonological form (usually evident in laboratory settings) as opposed to when learners focus on meaning, which happens in more free naturalistic speech. This issue is important for the advancement of knowledge regarding L2 phonological acquisition and production. Without a solid understanding of the possible differences between these two situations, the

knowledge base of L2 pronunciation remains skewed to reflect a more careful style of speech under the use of a monitor. In order to gain a broader understanding of the actual phonological abilities of L2 learners, research must include a description of meaning-focused speech phenomena as well as form-focused phenomena.

The present study attempts to begin to describe, by empirical means, the differences between form-focused and meaning-focused phonological production by comparing participants' speech in both contexts using acoustic measures. I will propose to test the hypothesis that L2 learner pronunciation is more native-like in form-focused tasks than in meaning-focused tasks. The structure of the remainder of this paper is as follows: Section 2 presents a brief overview of studies that have investigated phonological perception in naturalistic and laboratory contexts as well as phonological production in a laboratory setting. Section 3 describes the cognitive processing issues that may contribute to possible differences between accuracy when focusing on form as opposed to meaning; including consciousness, awareness, and attention. Section 3 also describes the literature that has addressed monitoring and the issues that surround this psychological concept. Section 4 is a proposal of an experiment that will attempt to test the hypothesis regarding differences in pronunciation accuracy in the two aforementioned contexts (i.e., form-focused and meaning-focused tasks). This section includes a discussion on the possible results and the contribution such results may have on future research in L2 phonological acquisition. Finally, in section 5, I present conclusions that can be drawn from the current paper.

2. Phonological Studies

Most research that has investigated the acquisition of an L2 phonology, including production studies, have been laboratory based experimental studies. A sample of some recent studies shows that this is the case. Escudero and Boersma (2004) tested the ability of native Spanish speaking learners of different dialects of English to perceive differences between the vowels in *sheep* and *ship* in a laboratory setting. Face (2006) looked at Spanish rhotic pronunciation by acoustically measuring learners' rhotic production. Llama, Cardoso, and Collins (2007) studied first language (L1) and L2 influences on learning a third language in English-French and French-English speakers learning Spanish. They used acoustic measurements of voice onset time to show that L2 influence is greater than L1 influence on the acquisition of a third language. Colantoni and Steele (2008) used laboratory methods to investigate English-speaking learners of Spanish in their ability to pronounce target-like consonant clusters. The few studies mentioned here compromise only a small portion of the laboratory-based research on phonological phenomena.

The amount of research that has espoused laboratory methods has been helpful in that it allows for the control of many extraneous factors and for the measurement and control of precise acoustic properties of speech in both production elicitations and perception tasks. However, not much is known about the phonology of naturally occurring conversational speech (Local, Kelly, & Wells, 1986). It may be that even less is known about the phonology of the naturally occurring conversational speech of L2 learners. In a study on the phonetics used in conversational speech, Local, Kelly, and Wells investigated the speech of Tysdale English. This study described the prosodic

elements such as pitch, duration, and stress as well as vowel quality that contribute to turn-taking events in the course of a conversation. Because this study took a more conversational analysis approach (i.e, describing the phonetic cues that contribute to turn-taking), the data was coded impressionistically. The study was actually more concerned with what these phonetic cues communicated in the conversation than describing the phonetic properties themselves.

Pennington (1992) carried out a study that explored the phonology of L2 learners in oral interviews. This study also employed impressionistic means to describe overall phonological proficiency which was then correlated with other prosodic elements. The goal of the study was to show that phonological fluency indicates the level of phonological proficiency of learners. Fluency was opperationalized by syllables per second, max words per run, and phonological grouping (elision and stress reduction or clitic-primary word formation). The results of Pennington's study suggest that fluency does correlate with overall proficiency. However, the variables in this study were also impressionistically based and do not show how native-like the participants' pronunciation was.

The two studies mentioned here focused on free conversational speech; however, their focus was not on native-like phonological accuracy. One study that did consider accuracy investigated the differences in phonological perception and processing performance between a meaning-focused versus form-focused task. In one of the experiments carried out by Trofimovich and Gatbonton (2006), participants were split into two groups. One group was a "focus on form" and the other was a "focus on meaning" group (p. 524). Participants were also split into two groups by their

pronunciation accuracy in Spanish based on an impressionistic rating. All participants listened to a list of words and were asked to repeat the words they heard as quickly and accurately as possible after hearing them. The focus on meaning group was also asked to rate each word they heard on the pleasantness that the word evoked whereas the focus on form group was asked to rate each word on the clarity with which the word was enunciated. Latency times were taken to measure ease of processing the stimuli.

The results showed that a focus on meaning only hampered participants' ability to process the input if they were assigned to the lower-level pronunciation accuracy group. There was no latency effect for participants that were assigned to the higher-level pronunciation accuracy group. Trofimovich and Gatbonton (2006) vindicate these results by explaining that higher-proficiency learners have a higher working-memory capacity than low-proficiency learners and are able to process both form and meaning where as low-proficiency learners are not yet able to do this.

This study attempted to show that phonological processing can be facilitated by repetition (results from an experiment not mentioned herein) and a focus on form in order to suggest pronunciation instructional methodologies. Although pronunciation accuracy was involved in this study, the focus was on the phonological processing of input rather than on the effects that a focus of attention on form or meaning has on phonological output. In addition, the measure of pronunciation accuracy was based on impressionistic accounts rather than an acoustic comparison to native-like norms. Therefore, the present study contributes to the field of L2 phonology acquisition by investigating the effects that a focus on form or a focus on meaning has on pronunciation accuracy relying on previous research that suggests that when a learners

focus on meaning, their ability to attend to formal accuracy diminishes (VanPatten, 1990, 1996, 2007). Another way in which the present study diverges from the mentioned studies is that it compares the pronunciation accuracy of L2 learners using acoustic measurements rather than relying on impressionistic means of classification.

Since prior L2 research has shown a disparity between form-focused and meaning-focused tasks in morphosyntactic phenomena as well as Trofimovich and Gatbonton's (2006) study on input processing, it is expected that differences in pronunciation accuracy will also be evident in these two types of tasks. In order to understand this discrepancy more fully, a discussion on two concepts that contribute to differences in form-focused versus meaning-focused tasks is necessary.

3. General Cognitive Processing and The Monitor

General cognitive processing and the use of a linguistic monitor are both important in understanding why there may be differences in production performance in form-focused tasks versus meaning-focused tasks. I will first discuss some of the issues in cognitive processing that are relevant to the acquisition and production of L2 phonology. This discussion is followed by a description of the monitor and how monitor use may influence production accuracy.

3.1. General Cognitive Processing

One of the most important constructs that influences the ability to acquire an L2 is the learner's consciousness regarding input and production. The term consciousness,

however, is somewhat vague because it has been used to describe many different aspects of second language learning and is therefore somewhat problematic as a term to describe learners' abilities in perceiving input and processing the input for uptake. Schmidt (1994) divides consciousness into four different senses of the word and states that perhaps the most common use for the term consciousness actually corresponds to the term awareness. Regarding awareness, VanPatten (1996) states that some studies show that attentional subcomponents (i.e., alertness, orientation, detection) can happen without awareness. However, these results are based on adults' L1 and they could be an outcome of learning and extended language use. This phenomenon is very different from L2 learning where learners are creating form-meaning mappings. Therefore, researchers cannot conclude that L2 input processing happens without awareness.

Although awareness of language may contribute to acquisition, the more important aspect of consciousness for formal accuracy is attention. Schmidt (2001) asserts that attention is extremely important in second language acquisition (SLA). Attention is necessary for storage, hypothesis formation and testing, as well as noticing differences between learners' interlanguage and target language speech. Schmidt also discusses the fact that attention is limited, selective, and partially subjective to voluntary control.[1] In addition, although attentional capacity is limited (Kormos, 1999, 2000; Schmidt, 2001; VanPatten,

[1] Attention is only *partially* subjective to voluntary control because the attentional resources that loud noises and surprising visual stimuli require interfere with other attentional focuses and such a use of attentional resources is involuntary.

1990, 1996, 2000), Schmidt mentions that there is some flexibility to this limitation because different modalities such as visual, auditory, vocal, and manual modalities may share the attentional resources – each modality using more or less attentional resources than the others at any given time. Understanding the issues surrounding attention is important for SLA because it means that learners will only attend to a certain amount of the input available, which includes their own output (section 3.2.), and that they have at least some control over the particular aspect of input to which they attend. Therefore, learners are able to attend to form and can choose to do so.

That learners have some control over the orientation of attention, however, does not necessarily mean that they do not systematically attend to features in the input that are more salient. VanPatten (1990, 1996, 2007) claims that the most salient feature in the input is meaning, followed by primary lexical items, then formal properties; therefore, attention resources will be first focused on meaning. Because attention has a limited capacity, learners (at least at the beginning stages) cannot attend to all of these features in the input at the same time. VanPatten (1996) argues that detection, a sub-process of attention where pieces of data in the input are detected and made accessible for further processing, causes interference for processing other information and that it takes up a large amount of attentional resources. This interference is what restricts the ability of learners to pay attention to everything in the input and creates the need for learners to decide to what they will attend; which, as mentioned, may only be semi-voluntary. Schmidt (2001) states that because of this limitation in capacity, a cost-benefit analysis decides how learners allocate their attention. Because meaning is usually more beneficial in conversational interaction, learners tend to allocate their attention towards meaning first.

According to VanPatten (2007), the reason that learners attend to meaning before form is that, at first, comprehension takes a great amount of cognitive effort and meaning is more salient in communicative tasks. Because form is of secondary importance, learners do not attended to it until they are able to spend less cognitive resources on meaning. Although learners have the tendency to attend to meaning because of how salient meaning is in communication, the issue is not whether learners pay attention to meaning or form, but that they cannot attend to both until form-meaning mappings have been created and more attentional resources are made available. VanPatten has articulated his ideas in his *Input Processing* model. VanPatten (1996) outlines two main principles, the first of which contains three sub-principles, that explain how L2 learners process input. These principles are provided in (1) below.

(1) P1. Learners process input for meaning before they process it for form.
P1(a). Learners process content words in the input before anything else.
P1(b). Learners prefer processing lexical items to grammatical items (e.g., morphological markings) for semantic information.
P1(c). Learners prefer processing "more meaningful" morphology before "less" or "nonmeaningful morphology."
P2. For learners to process form that is not meaningful, they must be able to process informational or communicative content at no (or little) cost to attention. (pg. 14-15)

One study that led VanPatten to articulate these principles was VanPatten (1990). In this study, VanPatten investigated learners' ability to process form and meaning simultaneously. Participants listened to a passage in Spanish on inflation in Latin American countries. Participants in this study came from three different proficiency levels and were split into four different conditions. One group was to concentrate only on meaning, the second group was to concentrate on meaning and the word *inflación* 'inflation' (a content

word), the third group was to focus on meaning and the word *la* ‘feminine definite article’ (lexical item), and the fourth group was to concentrate on meaning and the verbal inflection –*n* ‘third person plural’ (grammatical item). In order to operationalize conscious attention, participants who were asked to pay attention to more than just meaning wrote a check mark on a piece of paper every time they heard the item they were instructed to listen for and comprehension was assessed by free written recalls.

The results of this study showed that participants who only focused on meaning scored the highest on the comprehension measure and each subsequent group scored lower, with a significant drop in comprehension scores with participants who were asked to focus on the verbal inflection -*n*. This study provides evidence that attempting to pay attention to meaning and form simultaneously negatively contributes to comprehension ability (processing of meaning). When participants were asked to focus on form, their ability to process meaning diminished. However, it is important to note, as VanPatten (1990) admits, that this study concentrates on morphological processing. Schmidt (2001) cites Peters (1998) who states that learners must attend to input in all domains of language learning. Although Peter’s statement is intuitive, empirical research on attention has continued to focus on morphosyntax and studies focusing on the effects of attention and cognitive processing in phonology have yet to be pursued. VanPatten (1996) also mentions that a need exists for research that investigates cognitive processing in the SLA of phonology.

To sum up this section, attention is essential for SLA; however, attentional resources are limited and therefore learners cannot simultaneously attend to meaning and form at first. Learners tend to focus on meaning, but can voluntarily focus on form, which will affect their comprehension ability. Although applying these principles to phonological

acquisition and production seems intuitive, little empirical research has been carried out in this field regarding input processing and attentional focus. Another concept that should be considered in possible phonological performance differences between form-focused and meaning-focused tasks is the linguistic monitor.

3.2. The Monitor

The notion of a linguistic monitor, as applied to SLA, comes from Krashen's (1981, 1987) *Monitor Theory* and has been subsequently incorporated into Levelt's *Speech Production* model (Levelt, 1993; Levelt, Roelofs, & Meyer, 1999). The monitor is a conceptual mechanism that consists of all of the learned grammar rules that an L2 learner has stored (Krashen, 1981, 1987). Krashen distinguishes learning (the creation of explicit knowledge) from acquisition (creation of implicit knowledge) and asserts that one of the purposes of the monitor is to supply items that learners have learned, but have not yet acquired.

Kormos (1999) and Levelt (1993) view the monitor as being a mechanism separate from the storage compartment of learned rules that discerns errors in speech production processes. Kormos defines the monitor as something that notices errors in learner speech. Levelt states that the monitor compares parsed speech (before and after being pronounced) to the original message that the speaker intended to convey and to the formal standards of speech (i.e., phonological, morphological, and syntactic norms). He also claims that the monitor, as a component of his *Speech Production* model, also creates instructions for correction. Levelt (1983) mentions that the monitor focuses on three facets of learner speech and illustrates these facets with the questions that learners ask themselves (or the

learners' monitor asks): Do I want to say this now?, Do I want to say it this way?, and Am I making an error?. The first question aids the construction of a linear message out of complex concepts (i.e., syntactic and morphological accuracy). The second question aids the construction of the message in an appropriate way (i.e., pragmatic accuracy). The third question checks for errors in form (i.e., lexical and phonetic accuracy).

Although learners can monitor their speech, Krashen (1981, 1987) indicates that there are three major conditions that must be met for the use of the monitor. These conditions are 1) time, 2) a focus on form, and 3) know the rule. In other words, when L2 learners are able to focus on linguistic forms that they have learned, which requires a relatively unpressured situation, they are able to monitor their language production and consequently are more accurate than when not all of these conditions are met. Krashen also mentions that monitor use is more effortless when involving simple rules than when rules are more complex. Another factor that plays into the equation of monitor use is individual variation. Learners have at least some control over whether they choose to monitor their linguistic output or not, which parallels the earlier discussion on the partial voluntary control of attention. Differences in performance among learners provide evidence of this control. According to Krashen (1987), some learners use the monitor extensively while others hardly ever monitor their linguistic output.

Knowing what the monitor is and what the external factors that contribute to the use of the monitor is important for understanding why learners may be more accurate in their speech production in laboratory settings. Furthermore, understanding where the monitor fits into the *Speech Production* model is also helpful for investigating differences in formal accuracy between form-focused and meaning-focused tasks. In opposition to Krashen's

idea of the monitor, Kormos (1999) explained that a monitor containing its own system of rules would lead to an absolution of errors unless the system was degenerate or not complete which may be the case for L2 learners. However, the monitor is not restricted to L2 speech and can be occasionally used in careful L1 speech as well. Therefore, the monitor must be a component of a larger system that processes speech production.

Although Krashen (1987) described the use of the monitor for more accurate morphosyntactic production, he mentions that pronunciation can also be monitored. In this sense, monitoring plays an integral role in the *Speech Production* model (Levelt, 1993; Levelt, Roelofs, & Meyer, 1999). Levelt (1983) proposed a mechanical sequence of the formation and production of utterances that constitutes five processes– message construction (creation of meaning), formulation (assignment of linguistic form), articulation (utterance of phonetic string), parsing (comprehension of utterance and comparison to knowledge base), and monitoring (comparison to intentions and social speech standards). Four different components of the speech production system carry out these processes. Levelt (1993) posits a *conceptualizer*, a *formulator*, an *articulator*, and a *speech comprehension system*. Although a schematic representation of the *Speech Production* model shows the monitor in the *conceptualizer*, Levelt states that the monitor is not autonomous. "The main work [of monitoring] is done by the Conceptualizer, which can attend to internally generated messages and to the out-put of the Speech-Comprehension System (i.e., parsed internal and overt speech)" (p. 14).

That monitoring mostly takes place in the conceptualizer is important because it allows for the existence of what Levelt (1983, 1993) calls the "perceptual loop". The perceptual loop predicts that learners have the ability to monitor their own speech and make

corrections before uttering a single word. Kormos (1999) also mentions that learners are able to monitor their speech before an articulatory plan is created (presumably in the formulator). These statements do not to deny that the monitor also works for audible speech as well, they only support the claim learners are able to monitor their pre-pronounced speech. Consequently, the perceptual loop predicts that when learners monitor their speech, their grammatical accuracy improves as claimed by Krashen (1987).

Monitoring relates to the discussion on cognitive processes in that the efficacy of monitoring depends on the attentional resources of the learner (Kormos, 1999). Because attentional capacity is limited, the monitor will only catch a subset of the errors produced by the conceptualizer. Levelt (1993) also questions the monitor's ability to attend simultaneously to all aspects of speech and points out that L2 learner data show that not all errors in speech is corrected or even noticed. In order to overcome this deficiency, monitoring is context sensitive, focusing on different aspects of speech depending on which aspect (morphosyntax, phonology, etc.) the learner believes is most important considering the particular social context. Kormos (1999) asserts that, in general, the monitor catches phonological errors easier and faster than lexical and grammatical errors, which suggests that learners will especially make less phonological errors when monitoring their speech.

Kormos (2000) connected attention to monitoring in a study that focused on the role of attention in monitoring L2 speech. Participants in this study were thirty Hungarian learners of English that were observed to determine how they allocated their attention for monitoring their speech in information-gap activities. The results of this study, measured in self-corrections, showed that L2 learners focused their attention on phonological errors more than lexical errors. According to Kormos, this result is in contrast with what prior

research assumes – that lexical items are corrected more than other features of speech. This study also found that more advanced learners were able to correct discourse level errors while the lower proficiency learners only corrected their structural errors. This may seem contradictory to VanPatten's (1990) study where learners did better when they focused on meaning than when they focused on form. Nevertheless, it may be that the processing sequence for attentional focus in the input is different from what learners attend to while monitoring output. The proposed experiment in the present study may shed light on this issue.

To sum up this section, the monitor is a conceptual mechanism that controls L2 learners' output by comparing planned phonetic strings (pronounced and pre-pronounced) to known norms. There are certain conditions that dictate the ability to use the monitor such as time, a focus on form, and the explicit knowledge of the formal rules of the language. However, according to Kormos (2000), more proficient learners can monitor discourse-level speech as well as form. Monitoring is also dependent on attention. If form is not being attended to, formal accuracy is predicted to decrease. While this phenomenon has been demonstrated in morphosyntactic studies, the research on differences in formal accuracy in phonological production has been virtually nonexistent.

The present proposed study attempts to illuminate understanding of the differences in pronunciation between form-focused and meaning-focused tasks by comparing the accuracy of L2 learners' pronunciation with that of native speaker accuracy through acoustic measurements. Because of the cognitive load monitoring takes, since it requires attentional resources, the hypothesis that L2 learner pronunciation is more native-like in form-focused tasks than in meaning-focused tasks can be predicted to be true. In order to

test this hypothesis, I propose that the experiment in the following section be carried out. The following research questions will be addressed in this study:

1) Are there differences in accuracy rates of target phonological segments among English speakers pronunciation of L2 Spanish between meaning-focused tasks and form-focused tasks?
2) Assuming that there are differences in accuracy rate, does the amount of difference diminish as proficiency increases?

4. Proposed Experiment

The proposed experiment will address the research questions by recording the speech of English speakers of L2 Spanish from four levels of proficiency (beginner, intermediate, advanced, and super-advanced) performing form-focused and meaning-focused tasks. This section describes the planned experimental design.

4.1. Participants

Participants will complete a basic demographic survey. Only participants over the age of eighteen will be accepted. They will also complete the Versant Spanish Test (Pearson, 2008) to assess overall Spanish proficiency and to be able to categorize them according to proficiency level. The number of participants will be at least thirty per group so that robust statistical tests can be performed. Participants that will compromise the first two or three levels will be pulled from university Spanish classes. Participants for the third and fourth groups will likely come from graduate students studying Spanish. Participants for the super-advanced group may be found in this context, but these learners are

considered to be found among learners that use Spanish for their job or have married native Spanish-speakers and therefore have used Spanish frequently on a daily basis for a considerable length of time. A native-speaker group will also be recruited which will compromise a control group to which accuracy rates can be compared.

4.2. Procedures

All participants will be asked to complete three different tasks that differ with respect to the amount of form-focus versus meaning-focus that they require. All tasks will be recorded so that participants' speech can be acoustically analyzed. The first task will be a fifteen to thirty minute oral group discussion between two of the participants and a native-Spanish speaker of approximately the same age. Participants will be told that they will be asked to recall the main points of what they talked about in the group discussion after completing this task in order to get them to focus on meaning during the discussion. Only the last ten to fifteen minutes of the recording will be analyzed in order to decrease instrumentation effects (i.e., careful speech because of participant awareness of recording devices).

The second task will be a text reading of around 300 words. Text readings constitute an intermediate level between form and meaning focused tasks. Text readings allow learners to focus on the meaning of the reading at the same time as allowing some focus on phonological form; it lowers the cognitive load because it provides the material that learners pronounce and they do not have to formulate their own concepts. When completing this task, participants will be asked to accurately read the text aloud, and that they will be asked to summarize what the text was about upon completion of the task.

The third task that participants will complete will be a word repetition task which will consist of fifty words. Participants will be asked to pronounce words that are shown on a computer screen, paying attention to their pronunciation accuracy. The words that will be used will exclude cognates and will include target phonological segments that will be compared.

Target phonemes that will be analyzed include /p/, /t/, /k/ (analyzed in terms of voice onset time); /ɾ/, /r/ (analyzed in terms of closure and duration); and /a/, /e/, /i/, /o/, /u/ (analyzed in terms of vowel quality). These phonemes and measurements are chosen based on known differences between English and Spanish phonology and are difficult for English-speaking learners of Spanish to acquire, attested by various studies (see Zampini, 2008 for further discussion). Average voice onset time, rhotic articulation, and vowel quality (per F1 and F2 for each target vowel) accuracy rates will be calculated for each participant, separated by each task. The accuracy averages of each learner will be compared to native-speaker norms and across tasks to see if there are differences in accuracy (compared to native speaker norms) between meaning-focused and form-focused tasks. The data will also be split by phonetic feature (i.e., voice onset time, rhotic accuracy, and vowel quality) to see if some features are produced more accurately than other features. Accuracy rates will also be compared across proficiency groups to see if there are differences between these groups. Statistical analyses will be carried out (one-way ANOVA) to compare accuracy rates between meaning-focused and form-focused activities within and across groups.

4.3. Possible Results and Discussion

The expected results from this experiment are that a significant difference in accuracy rate will be found between the word repetition task and the oral interview tasks for at least the first three participant groups. A significant difference between these two tasks and the text reading task would also suggest confirming the hypothesis that L2 learner pronunciation is more native-like in form-focused tasks than in meaning-focused tasks. However, I am unsure as to what the results of the statistical tests may be concerning this intermediate task. As for the super-advanced group, the expected results are also unclear whether there will be a significant difference in pronunciation accuracy among tasks or not although results from Kormos (2000) suggest that there would not be a difference across tasks.

These possible results would provide answers to the research questions. Expected results would show that there are differences in accuracy rates of target phonological segments among English speakers' pronunciation of L2 Spanish between meaning-focused tasks and form-focused tasks. Expected results would also show that the amount of difference does diminish as proficiency increases. Combined, these answers would confirm the proposed hypothesis – L2 learner pronunciation is more accurate in form-focused tasks than meaning-focused tasks.

The results of this study would therefore contribute to the field of L2 acquisition of phonology by providing empirical evidence that meaning-focused tasks and form-focused tasks provide systematically different output. These results would suggest that researchers use both types of tasks to be able to describe fully the phenomena surrounding the L2 acquisition of phonology.

5. Conclusion

In this paper, I have proposed that research conducted on the L2 acquisition of phonology should consider the possible differences in pronunciation between meaning-focused and form-focused tasks when attempting to describe L2 learner speech. I have provided a brief overview of some of the laboratory-based studies as well as some studies that have looked at phonology in a setting more conducive to free naturalistic speech and discussed the drawbacks that both types of studies have encountered.

I have also discussed two factors that contribute to possible differences in accuracy between task types. Attentional resources and monitoring allow learners to focus on formal aspects of language; however, by focusing on form, comprehension suffers because of the limited attentional capacity and the amount of capacity that monitoring entails. These factors predict a difference in pronunciation accuracy between form-focused and meaning-focused tasks.

The proposed experiment will provide the empirical means to describe quantitative differences between the aforementioned task types as well as possible differences among proficiency levels. The expected results would suggest incorporating both types of tasks in research concerning L2 phonological acquisition in order to provide a better picture of the phonological capabilities of L2 learners in all contexts.

6. References

Best, C. T., McRoberts, G. W., & Goodell, E. (2001). Discrimination of non-consonant contrasts varying in perception assimilation to the listener's native phonological system. *Journal of the Acoustic Society of America. 109*,(2), 775-794.

Brown, C. A. (1998). The role of the L1 grammar in the L2 acquisition of segmental structure. *Second Language Research, 14*(2), 136-193.

Colantoni, L., & Steele, J. (2008). Integrating articulatory constraints into models of second language phonological acquisition. *Applied Psycholinguistics, 29*(3), 489-534.

Ellis, R. (2008). *The Study of Second Language Acquisition* (2nd ed.). New York: Oxford University Press.

Escudero, P., & Boersma, P. (2004). Briding the gap between L2 speech perception research and phonological theory. *SSLA 26*, 551-585.

Face, T. L. (2006). Intervocalic rhotic pronunciation by adult learners of Spanish as a second language. In C. A. Klee & T. L. Face (Eds.), *7th Conference on the Acquisition of Spanish and Portuguese as First and Second Langauges*, 47-58. Somerville, MA: Cascadilla Proceedings Project.

Kormos, J. (1999). Monitoring and self-repair in L2. *Language Learning, 49*(2), 303-342.

Kormos, J. (2000). The role of attention in monitoring second language speech production. *Language Learning, 50*(2), 343-384.

Krashen, S. D. (1981). *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon.

Krashen, S. D. (1987). *Principles and Practice in Second Language Acquisition*. London: Prentice-Hall.

Levelt, W. J. M. (1983). Monitoring and self-repair in speech. *Cognition, 14*, 41-104.

Levelt, W. J. M. (1993). *Speaking*. Cambridge, MA: MIT Press.

Levelt, W. J. M., Roelofs, A., & Meyer, A. S. (1999). A theory of lexical access in speech production. *Behavioral and Brain Sciences, 22*, 1-75.

Llama, R., Cardosa, W., & Collins, L. (2007). The roles of typology and L2 status in the acquisition of L3 phonology: The influence of previously learnt languages on L3 speech production. *Proceedings of the Fifth International Symposium on the Acquisition of Second Language Speech*. Florianopolis.

Local, J. K., Kelly, J., & Wells, W. H. G. (1986). Towards a phonology of conversation: Turn-taking in Tyneside English. *Journal of Linguistics, 22*(2), 411-437.

Pennington, M. C. (1992). Discourse factors related to L2 phonological proficiency: An exploratory study. In J. Leather & A. James (Eds.) *Proceedings of the 1992 Amsterdam Symposium on the Acquisition of Second-Language Speech.* 137-155.

Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. In J. H. Hulstijin & R. Schmidt (Eds.) *Consciousness in Second Language Learning,* 11-26.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.) *Cognition and Second Language Instruction,* 3-32.

Tarone, E. (1979). Interlanguage as chameleon. *Language Learning 29,* 181-191.

Trofimovich, P., & Gatbonton, E. (2006). Repetition and focus on form in processing L2 Spanish words: Implications for pronunciation instruction. *The Modern Language Journal, 90,* 519-535.

VanPatten, B. (1990). Attending to form and content in the input: An experiment in consciousness. *SSLA, 12,* 287-301.

VanPatten, B. (1996). *Input Processing and Grammar Instruction in Second Language Acquisition*. Norwood, NJ: Ablex Publishing Corporation.

VanPatten, B. (2007). Input processing in adult second language acquisition. In B. VanPatten, & J. Williams (Eds.) *Theories in Second Language Acquisition: An Introduction.* 115-135.

Pearson (2008). Versant Spanish test: Test description and validation summary. Pearson Education. Inc. Retrieved April 23, 2010 from http://www.ordinate.com/technology/VersantSpanishTestValidation.pdf

Zampini, M. L. (2008). L2 speech production research: Findings, issues, and advances. In J. G. Hansen Edwards & M. L. Zampini (Eds.), *Phonology and Second Language Acquisition*, Amsterdam: John Benjamins, 219-249.