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THE ROLE OF ORAL NEGATIVE FEEDBACK THROUGH WHATSAPP: a Study in Soure, PA

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The Role of Oral Negative Feedback through Whatsapp: Study in Soure, Pa

ANDERSON FRANCISCO GUIMARÃES MAIA

Tese submetida à Banca Examinadora designada pelo Colegiado do Programa de Pós-Graduação em ESTUDOS LINGUÍSTICOS, como requisito para obtenção do grau de Doutor em ESTUDO LINGUÍSTICOS, área de concentração LINGUÍSTICA APLICADA, linha de pesquisa Ensino/Aprendizage de Línguas Estrangeiras.

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A Deus, fonte de toda vida e toda sabedoria.

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RESUMO

Tendo como base o ensino e aprendizagem de língua estrangeiras, esta tese analisa o papel do feedback oral instrucional no ensino-aprendizagem de línguas através do WhatsApp em um grupo de licenciandos em Letras-Língua Inglesa da Universidade Federal do Pará – Campus Universitário do Marajó-Soure. Considerando as severas limitações enfrentadas por estes futuros professores de inglês, a comunicação móvel por meio do WhatsApp surge como uma possível solução para auxiliar no desenvolvimento da habilidade oral na língua estrangeira e, dentro do escopo deste trabalho, no feedback oral instrucional. Partindo de teorias de ensino e aprendizagem de língua estrangeira, feedback instrucional e aprendizagem de línguas assistida por tecnologia móvel, o principal objetivo deste trabalho foi de investigar o feedback oral instrucional como elemento facilitador do desenvolvimento oral em língua estrangeira através do WhatsApp. Para isto, foi realizada uma pesquisa quali-quantitativa como dados gerados a partir de quatro instrumentos de coleta: a) teste oral preliminar, b) notas de campo, c) entrevistas de grupo semi-estruturadas, e d) teste oral posterior. Os resultados demonstram que o feedback oral corretivo através do WhatsApp teve um impacto positivo no desenvolvimento de constituintes linguísticos estruturais na competência comunicativa em língua estrangeira; entretanto, quase nenhuma melhora foi observada na pronúncia segmental ou supra-segmental.

Palavras-chaves: feedback instrucional; desenvolvimento oral em L2; ensino de línguas assistido por tecnologia móvel; FonF; erro.

ABSTRACT

From the perspective of Instructed Second Language Acquisition, this dissertation analyzes the role of oral negative feedback in mobile assisted language learning through WhatsApp in a group of preservice English as a Foreign language (EFL) teachers at the Federal University of Para – Campus Universitário do Marajó/Soure, Brazil. In view of the severe instructional constraints faced by these preservice EFL teachers, mobile communication through WhatsApp has come as a possible solution to foster second language speech development and, within its scope, oral negative feedback. Based on theories of instructed second language acquisition, negative feedback and mobile assisted language learning, the major objective of this study was to investigate whether oral negative feedback facilitates or not L2 speech development through WhatsApp. For that purpose, a mixed methods study was designed with both quantitative and qualitative data generated by four elicitation methods: (a) preliminary oral test, (b), field notes, (c) focus group semi-structured interviews, and (d) posterior oral test. Findings demonstrated that oral negative feedback through WhatsApp had a positive impact on the development of structural linguistic constituents in L2 communicative competence; however, hardly no improvement was observed in segmental or supra-segmental pronunciation.

Key-words: negative feedback; L2 speech development; mobile-assisted language learning; FonF; error.

LIST OF TABLES

LIST OF FIGURES

SUMMARY

CHAPTER 1

INTRODUCTION

In this chapter, I establish the context of study, situating the relevance of this topic for the field and for English language learners. A brief synopsis of the relevant literature will be construed along with the existing knowledge gap to which I contribute here. Furthermore, I will list the research objectives and provide a synopsis of the research design used. This chapter ends with an overview of the dissertation and a few reasons for my personal interest in the subject.

Rationale and Context of Study

The global spread of English and its increasing socioeconomic importance have affected nearly every working adult in Brazil. This desire to communicate in the foreign language is often translated into the ability to speak it. However, time constraints and limited opportunities to actually use the language to interact in social and professional contexts create a major challenge for English language learners. As a consequence, even the most autonomous learners may find it difficult to develop their communicative competence in speech production.

These challenges are brought into the Instructed Second Language Acquisition (ISLA) field in the form of investigations that search for novel and efficient ways to meet the needs of globalized second language (L2) learners. In such regard, one of the central issues has been of how to use learners' erroneous attempts to speak as opportunities to enhance their own oral development.

The challenges faced by both English language pupils and ISLA researchers are especially unfavorable when learners are preparing to become English language teachers. This is what happens in the context where this study took place: undergraduate students with little or no background in English whose future profession is to teach it as a foreign language.

The program takes place at the Federal University of Para (UFPA), where I am a professor of English. The campus where I teach is located on the Marajó Island, North of Brazil, in a small town called Soure.

These learners face additional constraints in their pathway to SLA. First, there are no after-school English language programs anywhere in or near town. Thus, local students have never had any experience in the target language prior to their enrollment in the Teaching English to Speakers of Other Languages (TESOL) program other than what is offered in middle and high school. Second, the courses in the program that are dedicated to developing English oral proficiency are offered as intensive classes during 21 consecutive days once every term. During these courses, students are immersed in the language for a short period of time and then are refrained from any formal contact with the language until the following semester (months later).

As I mentioned, providing learners with feedback on their linguistic production, especially oral production, is a key aspect of SLA. In the context where this study took place, little time is left for practicing oral skills and even less time is left for teacher feedback and remediation.

If, on one hand, this case scenario exhibits several limitations for second language acquisition – especially oral feedback –, on the other hand virtual communication through mobile applications has been an increasing trend among English language learners. These TESOL students, for instance, are constantly texting and sending voice messages to one another, especially using WhatsApp. The intense use of mobile communication could then be a solution for the constraints in ISLA on Marajo Island. Therefore, this study explores the relation between oral corrective feedback and the mobile communication environment as one possible answer to the scarcity of this context.

Theoretical Background and Research Design

Oral corrective feedback, also known as negative feedback or error correction, fits within the interests of Instructed Second Language Acquisition (a sub-field of Second Language Acquisition) which is defined by Loewen (2020) as "a theoretically and empirically based field of academic inquiry that aims to understand how the systematic manipulation of the mechanisms of learning and/or the conditions under which they occur enable or facilitate the development and acquisition of an additional language". The role of negative feedback in response to oral production has particularly had theoretical and empirical support from other sub-fields of SLA, such as Classroom Research, whose ultimate goal is to know how instruction can be made more efficient in various educational settings (Williams, 2013).

The advent of technology has brought to oral negative feedback unique challenges and opportunities. Nassaji (2018) explained that, although it is reassuring that scholarship has grown in the understanding between technology and oral correction, there is still considerably much more research in traditional settings than in online learning environments. Nassaji and Kartchava (2018) add to this concern by stating that further investigations are imperative into the role of oral negative feedback in computer or mobile-assisted language learning, considering the growth of distance communication. On another note, a more in-depth discussion on the current knowledge about second language speech, oral negative feedback and mobile assisted language learning will be offered in the next chapter. Here, the purpose is to situate my dissertation within the field of Second Language Acquisition and highlight the knowledge gap I chose to focus on.

a. To investigate noticeability of oral negative feedback through WhatsApp features.
b. To find the relationship between oral negative feedback and modified output (uptake) in the mobile learning environment.

c. To understand how the new sense of time and place in mobile communication affect oral negative feedback.
d. To determine what types of oral negative feedback appear to be more successful in this learning context.
e. To determine what types of error better respond to oral negative feedback through WhatsApp.
f. To determine whether oral corrective feedback through mobile communication leads to lasting improvement in L2 oral skills.

The research design created to meet these objectives was based on both quantitative and qualitative data. Consequently, it falls under the mixed methods approach of research. Kelle, Kühberger, and Bernhard (2019) defined this approach as a combination of both quantitative and qualitative methods to generate and analyze research data.

In order to implement this investigation, I selected a group of nine volunteers from the context described previously to participate in a 7-month focus-on-form intervention through WhatsApp. The intervention was completely at distance and solely relied on mobile communication for providing input, practice opportunities, and, more importantly, oral corrective feedback to participants. In order to verify progress, a preliminary and a posterior oral test was administered before and after intervention. Intervention was divided into 7 instructional cycles. Each instructional cycle consisted of five stages of learning: preparation, instruction, independent practice, remediation, and reflection. Oral negative feedback was provided during the remediation cycle.

At each instructional cycle, I observed participants' behavior and oral performance before and after oral negative feedback was provided. Learners' behavior and performance were recorded on field notes. During the reflection stage of each instructional cycle, participants and I met for a focus group semi-structured interview.

Therefore, data was generated by four different methods here: (a) preliminary oral test, (b) focus group interviews; (c) field notes; (d) posterior oral test. Scores of preliminary and posterior oral tests were quantified while focus group interviews were used to qualitatively examine how oral negative feedback and mobile learning came together. Field notes generated both quantitative and qualitative data, considering that I quantified observed learning as qualitatively reviewed participants' behavior. A full description of how data was generated and analyzed is offered in Chapter 3.

This study offers some important insights to the role of oral negative feedback in mobile-assisted language learning (MALL). It provides an opportunity to advance our current knowledge of how error correction may or may not contribute to L2 speech development when feedback is provided by teachers and accessible to learners at anytime and anywhere.

Overview of Chapters

This dissertation consists of five chapters. This first chapter offered an introduction to the study by stating the problem, situating it within the knowledge field, stating research objectives, and providing an overview of the research design.

Chapter Two will present the literature related to the topic under investigation and establish the theoretical background needed to analyze the generated data. Accordingly, it will review issues related to second speech development, negative feedback, and mobile-assisted language learning. The literature review will also present the current scholarship available for each of the topics discussed.

Chapter Three will provide a more detailed description of the research method designed to conduct this study. In order to do so, I will restate the problem and research objectives, explain the research design and context of study as well as describe its participants. Furthermore, the chapter will describe the data elicitation methods and explain the triangulation strategies that were used to analyze quantitative and qualitative data.

Chapter Four is dedicated to the analysis of the data collected and discussion of the results. It will account for the findings that resulted from data generation and processing, relating them to the theory depicted in chapter Two. In order to do that, every instrument used for data collection will be revisited. Results will be mapped out and explained more fully. Triangulation strategies will be applied to cross-check data from multiple methods.

The final chapter will restate my objectives and summarize the main points of evidence. In addition, the chapter will assess the value and relevance of the key findings in the light of existing studies in the literature. It will outline some limitations of the study and make claims for new knowledge and contribution to the field. It will also provide implications, recommendations, and suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

Exploring technological avenues in second language speech production allows educators and researchers to understand oral corrective feedback from new perspectives. Part of the interest in experimenting has to do with continuing to establish over time *why* and *how* correction is used to foster language learning. In this sense, mobile technology has certainly brought oral negative feedback to a new avenue and reflects much more than the use of one more resource for language learning. It has challenged classroom research as it provides a broader range of possibilities for instruction through new learning environments.

This chapter will explore this educational avenue by providing an overview of current understandings about second language speech production, negative feedback, and mobile assisted language learning.

First, this chapter will examine L2 speech production by reviewing its most important issues, aspects and skills. To that end, I will begin with the general issues involved in speaking a second language. Next, a brief overview of recent studies on this matter will be offered, followed by a more in-depth understanding of interlanguage phonology and pronunciation.

Next, negative feedback will be discussed as a subfield of classroom research. Its key elements such as uptake and noticing will be addressed along with the definition of error. Other definitions will also be presented, especially the types of error and the types of correction that will be useful for this study. Additionally, I will discuss the sociocultural theory as the pedagogical orientation through which correction will be held and Focus on Form as a combined instructional decision.

Then, a discussion on the potential that mobile devices will be offered regarding both language development in general and the development of oral skills. Finally, the uncharted

territory of oral correction in MALL will come to place with the explanation of its current boundaries and gaps.

Oral Production in Second Language Acquisition

In this section, I will provide a brief discussion on second language speech production. General issues will be explored in relation to spoken language: the nature of speaking, production of speech, negotiation of meaning, and theories of speaking that have informed teaching. In addition, I will provide an overview of learner needs while developing second language speech. Finally, I will review the latest research studies on speech development.

General Issues in L2 Spoken Language

Kormos (2014) defines second language speech production as the product of four major processes: a) *conceptualization*, which is the cognitive retrieval of the information what one wants to say; b) *formulation*, which includes the linguistic content of the message; c) *articulation*, which is the actual production of sounds; and d) *self-monitoring*, which is constant control of what is said and how it is said. The ultimate goal of second language speech production is for formulation and articulation to become automatic, and therefore processing mechanisms (conceptualization and self-monitoring) can work in parallel.

Understanding this process has been one of the goals of studies in second language (L2) speech production over the past few decades. Although Kormos explained this process linearly, this area of inquiry is rather multifaceted and multidisciplinary. It extends across an array of different disciplines, such as Psychology, Physiology, Biology, Linguistics, and Education. Temple (2000), for example, investigated temporal variables in foreign language learner speech and native speech. Although findings were discussed from a cognitive processing perspective, the author pointed out psychological and educational variables that affected speech production in thirty students of French as a foreign language and twenty

native speakers of French. Another example is Locke and Bogin (2006) that also discussed speech production from a multidisciplinary standpoint: the authors adopted a biological framework to linguistic formulations. Brain plasticity, according to the authors, endows the young with a certain linguistic responsiveness that differs from mature individuals. Such developmental relations between biological and linguistic factors have then contributed to our understanding of L2 speech progress.

Second language speaking proficiency and development are therefore subject to various variables (J. E. Flege, 1988a, 1988b; Temple, 2000; Weissberg, 2006; Woodrow, 2006). Likewise, speech production may happen in a spectrum – from word-only level to free discourse level (Holtgraves, 2007; Toribio, 2001; Wrembel, Kul, & Dziubalska-Kolaczyk, 2011). As a consequence, one can affirm that speaking in a second or additional language is a predominantly *socio-cognitive* task. To explain better, speech production includes mental processes that underlie speech planning and communication strategies on one hand. On the other hand, L2 speaking results from social factors such as age, gender, social class, and ethnic identity (Kartushina, Frauenfelder, & Golestani, 2016; Larsen-Freeman & Long, 2014; Polome, 1997).

The mental processes that underlie speech production can be categorized into micro and macro-processes. S. Gass (2013) has explained that micro-processes are related to attention, working memory, integration and restructuring. Restructuring is considered the ultimate goal in cognitive processing as it entails the change in learner's interlanguage systems. While performing executive functions, learners consciously attend their own output – a process known as monitoring (Chang, 2012; J. E. Flege, 1995; Hardison, 2010). Monitoring language output includes how speech is produced. Chang (2012) highlights three aspects of speech that are monitored while learners plan their production: complexity, accuracy, and fluency.

Cognitive macro-processes are defined by Holtgraves (2007) as communication strategies that learners employ to fulfill instances of conversation breakdown. Swain (2009) expanded the notion of cognitive macro-processes by explaining the Interaction Hypothesis whose central tenet is that through input and interaction with interlocutors, language learners have opportunities to notice differences between their own formulations of the target language and the language of their conversational patterns. Learners would consequently build strategies to compensate their conversational flaws and get around holes in their interlanguage (Hong, 2002; Swain, 1993, 2005, 2008).

Nonetheless, the individual aspect of second language speech production is not limited to cognitive processes – be they micro or macro. It also entails other learner characteristics such as attitude, aptitude, motivation, age, and personality traits that may either hinder or help oral development.

Several studies in the field have attempted to identify and measure these characteristics in order to find their relationship to second language acquisition. An example of this is the study carried out by Gardner (1988) who offered a socioeducational model that relates second language achievement to five individual variables: integrativeness, attitudes toward the learning situation, motivation, integrative orientation, and instrumental orientation. These relationships were examined in studies conducted by Gardner and associates using the Attitude/Motivation Test Battery and various measures of second language achievement including self–ratings, objective tests, and grades. In Gardner's model, success in L2 speech production is directly related to cultural beliefs, attitudes, motivation, situational anxiety, and prior achievements to proficiency in second language. Gardner continued to develop this model with further tests and a more diverse population of participants. Over two decades, the author's model expanded and provided speech production

researchers with an accredited means to assess oral achievement in the light of individual features (Gardner, 2007; Gardner & MacIntyre, 1993a, 1993b; Gardner & Tremblay, 1994).

Although the cognitive aspect of speech production is unquestionably key to language development, Lantolf (2000) pointed out that "human mind is *mediated*" (p. 2). Speech production then is not only an individual task or a pool of mental processes. It allows learners to change the world, use symbolic tools or signs, to mediate and regulate their relationships with others and with themselves hence changing the nature of these relationships. The author proposed the Sociocultural Theory (ST) to which speech is a public manifestation of thought along with culturally created mediational artifacts. In other words, discourse practices are the linguistic organization of the inner, psychological plane. These practices are socially mediated by external constructs such as poetry, narratives, and conversations. All in all, linguistic signs and psychological processes do not precede social activity. It is the linguistic and cognitive engagement in social contexts that precede the construction of individual thought. ST will be more thoroughly explained later in this chapter.

Based on the concept of self-mediation, Kramsch provided important insights into the relation between linguistic signs and social interaction in speech (Kramsch, 2000, 2006, 2009). The author referred to Vygostsky and explained that sign mediation is a dialogic process. Therefore, the act of speech is culturally and socially motivated – even if it is to self. The way individuals name the world and express their thought is a consequence of external reality rather than random choices. Second language speech production, then, is a consequence of social and cultural experiences in the target language; not only linguistic input. Nonnative speakers of a language end up producing a new culture to the target language – which contains elements of L1 and L2. For example, a Brazilian immigrant in the United States may be fully competent in both languages (Portuguese and English), but creates

an intercultural style for speaking English that is both related to and distinct from the styles prevalent in either country.

This "intercultural style" was explained by Kasper and Blum-Kulka (1993) who provided an interesting perspective to the relation between social and individual aspects of speech production. The authors coined the term "interlanguage pragmatics" in which they bring second language acquisition and pragmatics to a single phrase. The term is defined as "the study of nonnative speakers' use and acquisition of linguistic action patterns in a second language" (p. 3). The intercultural style, explained the authors, is a consequence of speech production that only relies on linguistic signs, ignoring the need to address the target culture as part of the communication process. This hypothesis is fully supported by the literature of cross-cultural communication, notably interactional sociolinguistics (Angelelli, 2004; Gudykunst, 2002; Gudykunst & Mody, 2002; Tannen, 1983; Ting-Toomey & Chung, 2005; Wierzbicka, 2003).

Although interlanguage pragmatics might very likely cause communication breakdowns, difficulties in second language speech production usually being earlier on the phonemic level. Strange (2007) dedicated much attention to this matter after reviewing James E. Fledge's work on second language speech (J. E. Flege, 1988a, 1988b; J. E. Flege, 1995, 1999). One strong claim in Strange's work is that L1 phonological interference is the number one factor that causes difficulty to both recognize and produce segments in L2. Based on previous models of L2 speech perception - especially Kuhl's Native Language Magnet theory (Kuhl, 1993) and Best's Perceptual Assimilation Model (Best, 1995) – Strange suggested the Automatic Selective Perception (ASP) model in which speech perception is a combination of two modes: the context-specific phonetic mode and the phonological mode (Strange, 2011). To put it simply, speech perception is characterized by the fact that the more familiar sounds are, the easier it is to understand complex ideas. Consequently, speech production also

depends on speaker's familiarity with the segments needed to convey a message. The more familiar the speaker is to the sounds of a language, the easier it is to express complex ideas.

The theories summarized above provide an extremely broad view of issues discussed in the study of second language speech production. However, how does speech production in L2 relates to L1?

Giving a systematic account of L2 speech production is certainly not an easy enterprise. While L1 speech production studies are grounded on well-established theories, L2 speech is still hovering over more unanswered questions than conclusive answers.

Kormos and Dénes (2004) explained that the study of second language production is traditionally related to psychological and cognitive issues. As a consequence, L2 speech production is often times discussed as how it relates L1 speech. One example of a study in this line is an article published by Robinson (2007) where Japanese learners of English were given progressively complex oral tasks in both native and target language. One of the results indicated that participants' performance in their native language was not as affected by anxiety levels as oral performance in L2. Therefore, the author suggested that fluency in L2 is more heavily affected by emotions than fluency in L1.

One of the most important differences between L1 and L2 production is that L2 learners' knowledge of the target language is mostly often incomplete. As a result of this lack of linguistic and cultural competence, L2 speakers frequently need to make conscious efforts to reconceptualize their message in order to fit in their communicative capacity. In this sense, Dörnyei and Scott (1997) identified the four main causes for communication breakdowns in L2 speech production as opposed to L1: (a) resource deficits; (b) processing time pressure; (c) perceived deficiencies in one's own language output; and (d) perceived deficiencies in decoding the interlocutor's message.

Resource deficits occur in both L1 and L2 as speaker fails to use lexicon and syntax in either one; however, L2 limitations are not only a result of lack of knowledge. They may be a consequence of L1 interference while L1 speech production does not suffer any sort of language transfer. In addition, resource deficits in L2 may also be a result of anxiety issues caused by time pressure, for instance. This leads to the next source of problems in communication: processing time pressure. Second language speaking is also constrained by the lack of time available to perform the stages of speech production (conceptualization, formulation, articulation, and self-monitoring). The main reason for that difficulty in L2 is the lack of automatization in the target language. Linguistic forms are much more automatized in L1, causing the formulation and articulations phases to become faster.

Next, the ability to perceive deficiencies in one's own language output differs in L1 and L2 speech production. L1 speakers monitor their speech much better than their L2 counterparts. The reason for that is because monitoring lexical, syntactic, phonological and discourse decisions requires higher command of both linguistic and cultural knowledge. In addition, L2 speakers might also experience problems deciding whether their message has been accurate, appropriate, and understandable to the interlocutor (Swain, 2005).

The very same can be said about perceived deficiencies in decoding the interlocutor's message. In L2 speech production, speakers are not always able to retrieve linguistic and cultural information in the same capacity as their L1 (C. M. Chen & Lee, 2011; Housen & Kuiken, 2009; Taylor, 2011). In addition, L2 speech recognition is affected by limited attentional resources causing difficulties in noticing information.

Previous Studies on Second Language Speech Production

Second language speech production is a rapidly growing area of inquiry. Accordingly, this section will describe some of the recent studies and themes that have advanced this field.

Lambert, Kormos, and Minn (2017) examined the relationship between repetition and fluency in L2 speech learning. The study investigated the role of aural-oral task repetition in developing learners' ability to perform in specific stages of speech production – conceptualization, formulation, and monitoring. To this end, thirty-two Japanese ELLs repeated six times the same oral task. Participants ranged from novice to advanced proficiency levels. Results of that study demonstrated that repetition was beneficial to all learners, regardless of their proficiency level. Differences were mostly noted in the benefits of repetition at each stage of speech production. Lower level participants seemed to enhance their formulation stage while higher level learners improved in their ability to conceptualize speech in the target language.

Segalowitz (2016) focused on fluency attainment and proposed a study on this topic that goes beyond temporal and hesitation phenomena. It suggested a framework for understanding L2 fluency that would establish a relationship between cognitive processing and social context as determinants to shape fluency. According to the author, cognitive and utterance fluency need to be situated in the social context of communication. The main reason for that is the role played by the pragmatic and sociolinguistic nature of communication. At the end of his article, the author suggested further research on this relationship and advocates for a study of speech production that considers primarily factors that are external to the linguistic system.

Another interesting study on fluency was conducted by Skehan, Foster, and Shum (2016), which reported a comparison between first and second language fluency during narrative retelling tasks of varying degrees of structural organization. During the investigation, particular attention was given to the distinction between discourse-based and clause-based fluency. Results of the study suggested that fluency is directly related to formulaic language in both native and nonnative speakers. In contrast, higher lexical

sophistication and longer clauses are associated with clause-linked fluency problems, but only for native speakers.

Special education has been given important space in speech production research as well. Paradis (2016)'s study, for instance, described typical and atypical development of oral proficiency in ELLs. It also presented strategies for clinical assessment with second language learners that exhibited specific language impairments. The ability to develop in second language speech has found to be directly related to individual variations such as exposure to the target language, first language development, and age. Results in the study demonstrated that parental support is more important to impaired learners than to their non-impaired counterparts.

Kartushina et al. (2016) offered a review of the literature on another interesting and unexplored topic: the influence that L2 has on L1 speech production. The authors claimed that L2 can affect L1 production through a process called "backward transfer". Their review of publications in this theme suggested that most studies have pointed to backwards transfer on the phonetic level. Research, according to the authors, has also affirmed that age and stage of L2 learning are the most important variables in determining the degree of backward transfer.

In Brazil, Zárate-Sández (2017) conducted another innovative study that investigated the relationship between personality and L2 speech production. For that purpose, fifty-one English speaking learners of Spanish performed oral tasks that were scored for the degree of accentedness. Variance in participants' oral performance demonstrated important relationships with their pre-screened personality traits. Extraversion and neuroticism were found to play a decisive role in foreign accent.

Aragão, Paiva, and R. C. Gomes Jr (2017) have recently addressed the relation between emotions and L2 speech production, particularly with the use of digital technologies.

The authors conducted a qualitative study at Federal University of Minas Gerais, Brazil, where a group of college-level ELLs reported their experiences in L2 oral speech by means of digital technologies. Based on the assumption that negative emotions tend to interfere in the process of L2 speech production, the study aimed to investigate whether the use of technology could lower these emotions and support learning. Findings demonstrated that participants reported feelings of confidence and pleasure while using digital resources to speak in the target language. The authors concluded that the use of technology motivated L2 interaction whereas learners felt more willing to communicate.

Another interesting study was conducted by Poza (2011) about the influence of a computer voice conferencing environment called WIMBA on the anxiety level of 48 English language learners. After a combination of quantitative and qualitative data elicitation methods, the study concluded that the use of technology potentially decreased learners' anxiety levels if there are no technical issues during learning activities. Another conclusion of the study was that learners felt less anxious because the online environment reduced the risk of negative evaluation from teacher and peers in comparison to the face-to-face classroom environment. The main implication of lower anxiety in language learning was the more frequent and better quality of language production in the online environment due to higher risk-taking.

The studies outlined above are just samples of research that have taken place in the field of second language speech production. Themes that have gained impulse in the past few years include the Complexity Theory in L2 speech production (Kupske, 2017), individual differences and oral development (Chai et al., 2016; Escudero, 2016; Saito, 2018), bilingual speech production (Ortiz-Preuss & Rodrigues, 2017; Ribot, Hoff, & Burridge, 2017; Sorace, 2016), and technological resources to L2 speech development (Livescu, Rudzicz, Fosler-Lussier, Hasegawa-Johnson, & Bilmes, 2016; Monaghan & Rowland, 2017; Saito &

Akiyama, 2017; van Doremalen, Boves, Colpaert, Cucchiarini, & Strik, 2016), to mention a few.

While this section focused on defining and describing second language oral production as a field of inquiry, the next section will focus on second language oral performance with special attention to what is considered "good enough" in this type of linguistic achievement.

Second Language Oral Performance

Second language oral development is a life-long experience. However, learners yearn to achieve a developmental stage when they are considered "good enough" in their use of L2. Although this good-enough stage is by no means a "finish line" in their pathway to second language acquisition, it does serve as an important indicator of success. Considering the importance of such concern, second language oral performance has been assessed on basically two levels: structural and discourse (De Jong, Steinel, Florijn, Schoonen, & Hulstijn, 2012).

On the structural level, L2 oral performance may indicate learners' knowledge of individual sounds, stress and intonation patterns, word choice, word order, and sentence building, to name a few. On the discourse level, L2 oral performance may exhibit learners' ability to initiate or end a conversation, resource to communication strategies, or compensate for their lack of vocabulary or grammatical knowledge.

In the next few pages, I will present the communicative view of L2 speech development as a springboard to oral assessment. Then, I will discuss "pronunciation" as an exclusive aspect of L2 oral performance.

The issues that form the focus of attention in L2 oral performance around the world reflect the contexts in which English is learned. In some contexts, English is widely used in the community and learners need to acquire English in order to survive. In other contexts, the

language may be taught as a school subject but has restricted use in society at large. In both cases, English as a second language may be for educational, occupational, and social purposes. Consequently, the structural and discourse elements that are expected in L2 speech performance are sensitive to contextual factors, such as those aforementioned. However, the common ground that brings all these contextual factors together is the need for communication.

Accordingly, it is reasonable to assume that second language speech performance should be based implicitly or explicitly on some model of communicative competence. Habermas (1970) and Hymes (1972) initiated this discussion by offering general and abstract terms around the communicative competence that were afterwards defined more precisely by Canale (1983). To Canale (ibid), communicative competence is a broader term that comprise four competencies:

a. Grammatical competence: knowledge of the language code and its structural aspects, namely phonology, morphology, and syntax.
b. Discourse competence: knowledge of the social rules underpinning language structure, such as textual semantics and pragmatics.
c. Sociolinguistic competence: this is the control of speech and writing styles that are more appropriate to various situations; rules of politeness.
d. Strategic competence: knowledge of coping strategies which compensate for linguistic and social constraints and keeps communication going.

This communicative perspective of L2 oral performance was supported by Functionalism, a linguistic theory to which language was essentially a tool for meaning making and social interaction (Dik, 1981). To explain better, functional theories of grammar went beyond the knowledge of linguistic constituents and considered the context where such elements are used and how they are instrumentally functional in the given environment

(Dirven & Fried, 1987; Nichols, 1984). Dik (1981) noted that, in the functional paradigm, language is an instrument of social interaction among human beings, used with the intention of establishing communicative relationships. Nichols (1984) furthered this notion by stating that Functionalism is concerned with the functions performed by a language, primarily in terms of cognition (relating information), expression (indicating mood), and conation (exerting influence).

Second language speech performance is then assessed in the light of Functionalism and the communicative competence. So is performance in second language composition after all. Language learners my perform both in spoken and in written and demonstrate their communicative (and functional) domain of structural and discourse knowledge in either way. However, there is one more dimension in speech performance that differentiates it from any given writing – pronunciation – which is what the next section will turn to.

Pronunciation

According to Seidlhofer (2001), pronunciation is "the production and perception of the significant sounds of a particular language in order to achieve meaning in contexts of language use" (p.56). These significant sounds comprise segmental sounds, stress, speech melody and intonation. The author affirmed that pronunciation goes further beyond the grouping of sounds, though. It reflects the identity of the speaker. For that reason, pronunciation involves individual and social aspects of communication.

According to Avery and Ehrlich (1992), there are historically two main views on pronunciation in second language oral production. One view states that the main aim of second language pronunciation is to vanish any trace of non-native accent. The other view holds that focusing on pronunciation becomes futile after L2 speakers are intelligible enough.

Therefore, based on the communicative and functional perspective of language, L2 pronunciation has switched from a search for native likeness to a search for intelligibility. In

this sense, L2 speech production is satisfactory when communication takes place which is the view adopted in this study.

From a structural standpoint, pronunciation in English has traditionally been described as either segmental or suprasegmental (Derwing, 2008; Munro & Derwing, 2015; Seidlhofer, 2001). The segmental elements comprise allophones and phonemes and how different sounds lead to differences in meaning. The suprasegmental aspect of pronunciation involves stress at both word and sentence-levels, rhythm, and intonation or prosody. Stress refers to the energy we deposit on some idea and this energy is manifested through extra vowel length and voice volume. Rhythm is the link made between sounds within a word or between words while intonation and prosody refer to voice pitching to convey meaning (Derwing & Munro, 2005; Leather, 1983; Seidlhofer, 2001).

Avery and Ehrlich (1992) also affirmed that learners' pronunciation is influenced by the sound system of the target language in at least three ways. First, there may be difficulties when learners encounter contrasts between the sound inventory of their native language and target-language. The combination of so-me sounds may also be a barrier for accurate pronunciation – even if the sounds isolated are present in the native language. Second, the authors explained that learners may face physical limitations to pronounce sounds in English. Pronunciation, then, demands preparation in our mouth musculature as well as our fine motor system. On this issue, Keys (2001) related the sound system of a language to physical characteristics of the sound production of that language. For the author, the sounds which are identical in both languages – learners' native language and target language – may consequently be produced in different pitch contours or with the mouth in a different position.

Still on this issue, Seidlhofer (2001) discussed articulatory settings – the long-term articulatory postures – forming the major properties of accents. This description of accents

concerns aspects such as the distribution of muscular tension and movements of the speech organs. These aspects are held in contrast between target language and various first languages.

The third way in which the sound system of the target language can influence learners' pronunciation is related to how language suprasegmental features may cause confusion to learners. Second language speakers would transfer patterns of stress, intonation, rhythm and melody – also called prosody – from their native language to the target language. There are several studies on this aspect of pronunciation. An instance of such studies is the one by Derwing and Munro (2005) in which the authors discussed the nature of foreign accents and their effects on communication. Their conclusions indicated much relation between stress, intonation and attitudes[i] or emotions. Derwing and Munro (2005) finally concluded that mistakes on stress and intonation usually cause serious breakdowns in comprehension.

In order to demonstrate how stress patterns have a key role in comprehension, Kennedy and Trofimovich (2010)'s study explained that "when native listeners (of English) were presented with the non-native pronunciation 'norMALLy', they claimed to have heard 'no money'; when the learner pronunciation was 'cheMISTry', they interpreted this as 'community'". This transference of suprasegmental patterns from L1 to L2 is related to the relevance of pronunciation to convey messages as argued by Seidlhofer (2001). According to the author, prosody, stress, and rhythm may be as meaningful as the words themselves.

Notwithstanding the importance of such language features in L2 oral production, individual differences also play a critical role in pronunciation.

Avery and Ehrlich (1992) presented some factors that affect pronunciation and should be considered in L2 oral performance such as biological factors. The *critical period hypothesis*[ii] is used to highlight the idea that children can achieve native-like pronunciation while adults cannot. D. Brown (2001) built on that and explained that the great difference in

pronunciation ability concerning age should be restricted to before and after puberty. For the author, a fifty-year old can be as successful as an eighteen-year-old when other factors are similar. Therefore, Brown (2001, p.284) affirmed that "the younger, the better" is nothing but a myth as far as adults are concerned. Although this is a general fact, some studies have recently clarified that some adult learners do achieve native-like pronunciation and that this possibility varies from individual to individual (Derwing & Munro, 2005; Jenkins & Leung, 2014).

Another factor that should be considered in pronunciation assessment is the socio-cultural one. To Avery and Ehrlich (1992), this is the most decisive aspect when native-like pronunciation is concerned. For the authors, the more learners feel comfortable in the culture of the target language, the more native-like they will sound[iii].

On this issue, Seidlhofer (2001) defended that pronunciation reflects both social and individual identities. The way someone pronounces a foreign language expresses his or her membership to a social group. One's accent may lead to conflicts like social acceptance, prestige and stigmatization. Hanle-Daniels (2017) discussed that by explaining that the accent in a second language is like an umbilical cord. In other words, the accent is something that continuously ties a speaker up to his mother tongue and is marked by the presence of L1 sounds, rhythm and intonation.

Another feature that affects pronunciation is individual personality. To Avery and Ehrlich (1992), when L2 learners present a more extroverted and confident attitude, they are more willing to take risks to practice their pronunciation in the target language; this cannot be said about more inhibited learners. As far as the pronunciation assessment is concerned, the authors affirmed that teachers should take this personality factor into consideration and create the best non-threatening atmosphere possible in the classroom. Learners, therefore, must develop a positive attitude towards language learning with teacher and peer support.

Learners' attitude towards pronunciation learning is also affected by individual purposes on L2 speech production. Some second language learners may feel the need to sound more (to what they believe is) native-like while others may not. Learners who wish to sound more like the native speakers of a given community are usually the ones to live in it. Kormos, Kiddle, and Csizer (2011) explained that this is a way to achieve social acceptance and construct an identity in the target community (and language). On the other hand, learners who do not seek native-likeness focus more on intelligibility as they usually talk to a variety of non-native speakers and use English as *lingua franca*.

Munro and Derwing (2015) brought this discussion back to instructional decisions by explaining that the purpose of the learner affects oral correction. The authors use the terms *appropriacy*[iv] and *correctness*[v] which are parameters for teachers to decide what is appropriate or not in second language speech production and, consequently, what should or should not be corrected (Derwing, 2008; Munro, 2008; Munro & Derwing, 2011). Therefore, *native-like* or *near-native* pronunciation should yield to adequate intelligibility that is appropriate to the context of learning.

In that matter, researchers began to reconsider the role of explicit attention to speech production in the classroom. The attention to which I refer to is the type that learners pay when oral feedback is provided. Following this conceptualization of the importance of negative feedback, the next section discusses core issues addressed in the plethora of existing research on error treatment in L2 oral production.

Negative Feedback

Negative feedback (NF) has typically been defined as information that leaners receive about errors they made in L2 production (Loewen, 2013). The term is also known as corrective feedback, error correction or error treatment. All these terms may be used in this

study interchangeably. In this section, I discuss the fundamentals of negative feedback as a field of inquiry and introduce core concepts that will be used in my study.

As a field of research, Negative Feedback has been traditionally placed within the broad interests of Instructed Second Language Acquisition (ISLA), in which formal learning contexts are used to reveal facts about second language learning processes in general. Accordingly, Negative Feedback is located at the nexus of theoretical and practical concerns (M. H. Long, 2007).

Historically, negative feedback has been a controversial territory. Earlier applied linguists like Krashen (1985) viewed corrective feedback as inefficient and disruptive to L2 speech development since it hindered learners' attempts to communicate at free. Nevertheless, research in content-based learning and immersion instruction has noted that while learners advance in L2 fluency, they do not achieve correspondingly higher levels of accuracy. As a result, researchers began to reconsider the role of explicit attention to errors in the second language classroom (Havranek, 2002; Mackey & Gass, 2015).

From an information processing view of ISLA, corrective feedback has been mostly concerned with L2 input, intake, mental representations, noticing, working memory, uptake, and output, for example. Two main theoretical perspectives have supported NF research: Skill Acquisition Theory (DeKeyser, 2007) and Socio-Cultural Theory (Vygotsky, 1978). Extensive investigation in NF has concentrated on interactionist approaches to SLA, therefore, I have chosen the Socio-Cultural Theory as the approach to develop this study (a more in-depth review of this theory will be offered further in this chapter).

It is also important to note the NF has been investigated under the label of "Focus-on-Form" or simply FonF (Lyster & Ranta, 1997). To explain better, theoretical support for negative feedback also comes from the importance attributed to the notion of FonF. Although more detailed discussion on the relation between negative feedback and FonF will be

provided ahead in this chapter, I will now focus on the theoretical underpinnings of FonF that also constitute the fundamentals of corrective feedback.

Poole (2005) explained that, within FonF, learners' performance is assessed based on errors and mistakes displayed in language production. Learner errors and mistakes are compared to a specific language form so leaners may notice their mistake and focus on the problematic form. This attention driving is called *noticing*.

Theoretical foundations of FonF, consequently of Negative Feedback, involve the study of *noticing* in language learning. Robinson (1995) equated noticing with the processes of detection and affirmed that noticing is related to bringing to consciousness. The author also said that "what is noticed is available for verbal report" (p.66). Swain (2005) hypothesized that output promotes noticing which may happen with or without the teachers' help. It leads us to a deeper notion of noticing in language learning. Referring to different authors, Swain (ibid) states that there are several levels of noticing. These are the levels identified by the author:

1. Noticing a form in the target language due to the frequency and salience of the features themselves (S. M. Gass, Mackey, & Pica, 1998).
2. Noticing the target language and comparing what was noticed to their own interlanguage (Schmidt & Frota, 1986).
3. Noticing that they cannot say what they want to say in the target language. Swain (1998) called this limitation *hole* in one's interlanguage.

Williams (2001) affirmed that noticing is a major aspect in FonF because it is a pre-condition for error correction. According to this author, noticing happens in two different situations leading to three different effects:

1. Learners notice a form or a word for the first time in the input. Here, the noticing of the new input potentially leads to the conversion of this input into intake[vi];

2. Learners notice that their interlanguage is at odds with the input available to them, that is, the language they perform is different from the input they receive. This noticing leads to destabilization of their interlanguage, once they feel the need to bridge the gap between their interlanguage and the target-language forms.

Swain (1998) explained that output has different potential roles in second language learning. One of them is *noticing*, which was described in the two previous paragraphs. The author also claimed that noticing is critical to the language learning process as it leads to *hypothesis formulation and testing*. The author explained that a new language situation needs to happen for hypothesis formulation and testing to take place. Swains hypothesis couples with the *Noticing Hypothesis* suggested by Schmidt (1995) to which noticing is responsible for providing intake for learning. Cross (2002) expanded this hypothesis by adding the following required conditions to it:

a) Input needs to be comprehensible – this is actually a necessary condition for noticing. When input is comprehensible, learners are able to compare target form and their erroneous utterance.
b) Learners must notice their error – noticing the form is insufficient for repair. According to the author, comparing the target form to their current linguistic knowledge is what enables learners to change.
c) Interaction must facilitate input noticing and output comprehension – this condition brings noticing to a context of communication rather than an isolated event. Again, language is mediated.
d) Noticing is most likely to happen through negotiation of form – a consequence of language mediation the negotiation of form which will be further explained ahead in this chapter.

Later in 2006, Swain suggested the word "languaging" instead of "output" (Swain, 2006). According to the author, the word "output" did not allow for the image of language as an activity; it rather evoked the image of language as a conveyer of a fixed message. "Languaging", on the other hand, entitled language with a higher social status. The new term referred to language as an agent in meaning making as it shapes and reshapes knowledge and experience while it is either spoken or written. "Languaging" also expands the role of production in second language learning. Instead of just noticing traits of their own linguistic production, formulating and testing hypotheses, learners may also transform their thought and (re)shape their cognition while "languaging" with others.

Another key concept in Negative Feedback is *uptake* which is defined as learner responses to corrective feedback by means of attempts to correct the error (Heift, 2004). The term is also referred to as *modified output* (Loewen, 2013). There is a consensus among applied linguists that uptake/modified output is a strong indication of the effectiveness feedback and consequently a possible facilitator of learning (Chaudron, 1988; Ellis, 2017b).

When it comes to cognitive processes involved in learner noticing and uptake, a key theory that deserves attention has been widely advocated by scholarship: the reconsolidation theory (Hupbach, Gomez, & Nadel, 2013; J. L. Lee, Nader, & Schiller, 2017; Nader & Einarsson, 2010). According to this theory, negative feedback, under the conditions suggested by Cross (2002), brings to consciousness mental representations that are challenged by a corrected form. In other words, negative feedback sets up the momentum for new knowledge to take over. The reconsolidation theory explains that old knowledge is encapsulated in time which makes it hard to break. Learners' perception of correction is what makes it possible to break into this capsule – better known as long-term memory – and enable neurons to reconsolidate existing schemata by incorporating new knowledge to it. This

process is very time-sensitive and falls into the previously explained “window of opportunity” which will be described later in this chapter.

The assumptions above represent important facts about the dynamics of negative feedback and what it takes to be effective. To sum up, these assumptions indicate that NF should happen within a communicative context (interaction) and the linguistic item to be addressed should be comprehended in form and meaning (I would add ‘use’ here). Finally, attention and noticing should not only be given to input, but also to output so the learner may actually change a linguistic error into the target-like form.

The fundamentals of negative feedback described in this section lead to a burning question: what is to be corrected? In the next section, I will provide a definition for error and describe how this concept has been described in the current literature.

The Concept of Error

As mentioned previously, second language oral performance is based on the communicative competence and the functional use of language standpoint. This decision consequently informs the definition of error that has been adopted to this study.

To begin with, error has been historically defined as a linguistic production that is different from native speakers. Although this definition still hovers over many contexts of second language acquisition, it has been severely problematized by researchers such as Bley-Vroman (1983), who referred to this notion as the “comparative fallacy”. In this sense, Year (2004) explained that studies that compare second language learners’ and monolingual native speakers’ are allegedly parasitic. More is found in Williams (2005), where this definition of error is referred to as “the native speaker norm”. Larsen-Freeman (2006) followed this critique by explaining that the native-like view reduces second language acquisition to a “monolithic, homogenous, idealized, static end-state competence where language acquisition

is seen to be a process of conformity to uniformity" (p. 194). Another problem that this view arises is what native form of a language should be considered the norm.

In a completely different vein, the crux of the argument in Cook (2012) is that L2 speakers develop "multi-competence" in which communication strategies, linguistic decisions, and cultural knowledge are recruited from both their first and second languages. For that reason, comparing a bi/multilingual-oriented oral production to a monolingual one would be meaningless and even misleading (Cook, 1995, 2012). Cook (2012) suggested that, instead of measuring L2 success against native speaker norms, different profiles should be defined of successful L2 learners *in every context* where the second language will be used. In other words, successful oral performance in second language should be measured against what learners aspire to. Success then is located – not generalized.

Recent research in applied linguistics has pursued this relativeness as for what to consider an error in L2 oral production (Lyster, Saito, & Sato, 2013; Sepehrinia, Nemati, & Khomijani Farahani, 2019; Staples, Laflair, & Egbert, 2017; Ulker, 2017). Scholars agree that error is best defined as undesired linguistic production in attention to whatever is the desired target-form – not necessarily the broad-termed and unrealistic 'native form'. The decision upon what is desired is sensitive to communication goals, cultural frames, and other contextual variables that inform pedagogical decisions. In this very study, the desired form of English is the one presented by the textbook that has been chosen for instruction which will be better described in Chapter 3. Therefore, errors will be identified as participants' English oral performance are measured against the target form presented in that material.

Types of Error in Oral Production

After errors are identified, they need to be systematized into categories that may be useful for further analysis of the effectiveness of corrective feedback. Therefore, also central to this topic is the classification of errors.

There is an array of different taxonomies for error classification in SLA (Ellis, 2017a; Hinkel, 2018; Nassaji & Kartchava, 2017; Sepehrinia et al., 2019). I have selected two error taxonomies for the purpose of this study. The first taxonomy is offered by Lyster (2001), adapted from Lyster and Ranta (1997), who describes 4 main types of error:

1. Grammatical errors: undesired forms in the use of modifiers, prepositions, pronouns, and other parts of speech, as well as verb and noun agreement.
2. Phonological errors: these refer to the addition/deletion of phonemes, erroneous realization of vowel, consonant or cluster sounds, or word/sentence stress, for example. A more thorough discussion on this type errors will be offered in the next subsection.
3. Lexical errors: erroneous word choice or use of morphemes.
4. Unsolicited uses of first language: this may happen as a negative transfer (see definition in the next subsection) or as a compensation for the lack of L2 knowledge.

Lyster's taxonomy will be used to evaluate linguistic errors in overall forms of L2 speech production, not only the pronunciation of sounds and words or sentences (phonological). On this note, however, pronunciation will be more closely evaluated and treated during corrective feedback than other types of structural errors. For that reason, I will briefly present the second taxonomy chosen for this study and then dedicate a new subsection to focus on phonological errors.

The second taxonomy is presented by Figueiredo (2003), who described three types of mistakes according to the degree in which they affect communication. This classification was based on the *error gravity notion* as proposed by Dulay and Burt (1982). The first type of errors presented by the author involves the ones that affect communication at a low degree.

Figueiredo (2003) explained that although these errors affect some elements in a sentence, the message is expressed satisfactorily. The author calls this kind errors *local errors*.

The second type of errors are those that cause a certain irritation or annoyance to the interlocutor. According to the author, these errors demand more effort from the interlocutor to understand the intended message. Figueiredo (2003) explained this kind of errors by describing the use of infinitive, instead of gerund, after the verb *to be*. The learner, then, would say "My favorite sport is *to swim*", instead of "My favorite sport is *swimming*".

Finally, Figueiredo (2003) presented errors that "affect the general organization of a sentence, thus, interrupting communication". When these errors are made, communication becomes extremely difficult or even impossible. The author called this kind of errors *global errors.* Although Figueiredo's classification was directed to written errors, I will apply them to oral production here due to the nature of this study.

Phonological Errors

This subsection will be dedicated to deepening the discussion on Lyster's second type of errors (phonological) by focusing on interlanguage phonology. In order to do that, I will review how scholarship has discussed this matter.

Keys (2001) built on the concept of interlanguage proposed by Selinker (1972) to explain the construct of *interlanguage phonology* which he defines as "the development of phonological abilities in a second language" (p.155). According to Keys (2001), interlanguage phonology is influenced by several variables. One of them is the context in which the speaker uses the target language – the topic, relations with the interlocutor and the degree of formality have a fundamental effect on the speaker's performance. Another variable presented by the author is the task imposed on the speaker. One example of a study in this topic is offered by Toda (2003) on Japanese speakers where learners were more

proficient in reading a list of words than in reading a dialogue. The dialogue reading, in turn, had better results than free speech.

Keys (2001) also explained that interlanguage phonology varies with time and improves with practice. This improvement is subject to several biological, psychological and social factors which have been discussed previously in this literature review.

Referring to Tarone (1987), Keys (2001) explained several processes through which interlanguage phonology is developed. These processes include negative transfer from native language, L1 acquisition processes, overgeneralization, approximation and avoidance. From these processes, Keys (2001) discussed only the negative transfer from native language, L1 acquisition processes and avoidance. I shall review his explanations of these issues in the following four paragraphs.

While discussing the processes and constraints in the phonology of interlanguage, (Keys, 2001) distinguished *positive transfer* from *negative transfer*. The explanation the author offered is that positive transfer happens when learners successfully transfer sounds from L1 to L2 which is only possible when the sounds produced are present in both languages or when the languages share similar sound environments – such as syllable structure. Negative transfer, on the other hand, happens when learners transfer sounds from L1 to L2 without success once they use sounds which are not present in both languages or when the languages do not share similar sound environments.

The second process involved in the interlanguage phonology development is related to the reactivation of *processes in L1 acquisition* (Keys, 2001). The author discussed this reactivation by comparing the strategies used by native speakers of English learning their L1 and the strategies used by L2 learners of English. Keys (2001) explained that in the former situation the tendency is for learners to use "cluster reduction, final consonant deletion and weak syllable deletion (aphesis)". However, Brazilian L2 learners favor *epenthesis*[vii] rather

than cluster reduction or deletion of the final consonant. The author clarified this comparison by means of the following examples: while learning the word *tree*, a native speaker would say [ti:] and a L2 learner of English would say [təri:]. Of course, the epenthesis would depend on the native language of the L2 learner.

Keys (2001) also referred to Tarone (1987) who treated the deletion phenomenon as a universal feature hypothesis. This hypothesis states that an open syllable – consonant-vowel (CV) – may be "a universal articulatory and perceptual unit such that the articulators tend to operate in basic CV programs in all languages" (Keys, 2001, p.164, quoting Tarone, 1987, p.78). Additionally, Keys (2001) drew our attention to the importance of the vocalic context once the preference for open syllables seems to be universal and can be held responsible – at a certain degree – for the development of interlanguage phonology independently of the native language process transfer.

The third process involved in the interlanguage phonology development discussed is *avoidance* (Keys, 2001). In this process, learners avoid the sounds that demand more efforts to be uttered. This happens due to inherent difficulty of target language sounds and phonological environments for the L2 learners. Keys (2001) assigned this phenomenon crucial importance because it can hinder advance in interlanguage phonology. The physiological matter has been previously discussed in this chapter.

Keys (2001) presented two levels at which errors occur due to cross-linguistic transference: segmental and suprasegmental levels. According to Keys (2001), referring to Odlin (1989), there are four basic types of segmental errors: phonemic, phonetic, allophonic and distributional. Phonemic errors are related to mispronunciation of sounds in the target language which do not exist in the native language. The example Keys offers is the following: a Brazilian Portuguese speaker utters [z][viii] for English /ð/ or [s] for /θ/. The author

explains this transference by saying that there is an absence of lingua-dental fricatives in Brazilian Portuguese.

Keys (2001, p.177) explained phonetic errors as those resulting from "cross-linguistic equivalence at the phonemic but not the phonetic level". The example brought by the author is the Brazilian Portuguese velar fricative /x/ which does not exist in English except in Scotland. According to the author, there is a tendency for an English native speaker learning Portuguese to utter /h/ instead of /x/.

Allophonic errors are illustrated rather than explained by Keys (2001). The example offered involves English speakers learning Brazilian Portuguese who tend to say aspirated [t^h] for initial [t].

As far as distributional errors are concerned, Keys (2001) explained that they are similar to the allophonic ones. The author also indicated that distributional errors result from the position of the phoneme in the word. The example offered involves the speakers of Brazilian Portuguese learning English. Considering the <sp> cluster, these learners do not present problems to pronounce it in the medial position but tend to pronounce it by using an epenthetic vowel in word initial position. Thus, they usually render [i:spƆƮt] for *sport.*

This brief review of types of error that may be found in participants' oral production in this study consider both structural and discourse levels of production. This is true because even errors that appear in the realization of final sounds, for example, may affect discourse by hindering communication. Therefore, structure and discourse should not be dissociated when errors are analyzed in L2 speech production. In that vein, although Lyster's and Figueiredo's taxonomies have been presented separately in this text, they will be rather used complementarily in this study.

In order to offer a more visual summary on the types of error described in this section, the chart below brought these types together.

Table 1. Types of Error in Oral Production

Types of Error in L2 Oral Production	
Focus on Meaning	**Focus on Forms**
Figueiredo (2003)	Lyster (2001)
Local	Phonological (Odlin, 1989)
Annoying	Grammatical
Global	Lexical
	Use of L1

Types of Negative Feedback

A considerable amount of literature has been published on the ways negative feedback may take place in second language acquisition. The advent of the communicative perspective in the 1960's rose the interest in how to deal with errors as natural and inevitable elements of the SLA process (Ellis, 2017b). Accordingly, Hendrickson (1978) noticed the need for establishing the grounds for error treatment. He undertook a systematic review of existing literature and concluded that "the literature on correction of second language errors is quite speculative and relatively scant" (p. 396).

Meanwhile, and in response to that very scarcity in the field, Chaudron (1977) developed the most complete and complex description of corrective feedback produced thus far. His highly complex flow-chart model distinguished 31 different manners in which teachers may correct errors. One option would lead to another progressively and in accordance to the errors made. Similar descriptive studies also took place in the same period and too pointed out the complexity of error treatment (Allright, 1975; Fanselow, 1977; M. Long, 1977), being Fanselow (1977) the pioneer in oral corrective feedback.

If Chaudron (1977) developed the most thorough taxonomy of error correction categories to date, Lyster and Ranta (1997) offered the most influential descriptive study on the effectiveness of such categories. However, the authors refined the Chaudron's 31 categories to a smaller group of six:

1. Recasts: learner's utterance is partially or completely reformulated without the error while meaning is preserved.
2. Elicitations: this might happen by having the learner complete teacher's utterance, asking a question that evokes the correct form, or asks the learner to reformulate his/her utterance.
3. Repetition: teacher echoes learner's erroneous utterance.
4. Metalinguistic feedback: teacher makes a comment or asks a question related to the well-formedness of learner's utterance.
5. Explicit correction: learner's attention is explicitly drawn to error and correct form provided.
6. Clarification requests: teacher indicates that leaner's utterance was somehow mistaken or misunderstood.

In a move from a descriptive categorization to a more psycholinguistic standpoint, Ellis (2001) reduced those six categories into three: recasts, elicitation, and metalinguistic feedback. More recently, the author reduced this list even more by suggesting two broad categories of negative feedback: input-providing and output-promoting (Loewen & Nabei, 2007; Robinson & Ellis, 2008). Following this current terminology, Loewen and Nabei (2007) have organized the options for corrective feedback in the as table 2 shows below.

Table 2. Options for Corrective Feedback

Input-providing	
Corrective Strategy	**Level of Explicitness**
Explicit correction	Explicit
Recast	Implicit
Prompt-promoting	
Corrective Strategy	**Level of Explicitness**
Metalinguistic Feedback	more explicit
Elicitation	Explicit
Repetition	Implicit
Clarification Request	more implicit

To explain the table above better, Loewen and Nabei (2007) clarified that negative feedback may be either input-providing or prompt-promoting (or output-promoting). Input-providing feedback happens when the learner receives explicit correction or recast by other. Recast, here, is described as a more implicit type of input-providing feedback. The second general category of negative is "prompt-promoting" which may happen in four different ways: metalinguistic feedback, elicitation, repetition, or clarification request. The table shows that these four types of feedback are differentiated by their degree of explicitness. This clarification finds support in Nassaji and Swain (2000), who emphasized that implicit-explicit is more of a continuum rather than opposing terms.

In Brazil, Lima (2004) investigated the negative feedback provided to four learners based on Lyster and Ranta (1997) and added one more error category: translation. This type of corrective feedback takes place when the learner makes an utterance in his/her L1 and the teacher repeats it in the target language as illustrated below.

Example 1 (translation)

Student: In the morning, I always have coffee and *pão de queijo*.

Teacher: A cheese puff.

Student: Coffee and a cheese puff.

In this study, I will use the categories presented by Lyster and Ranta (1997) and by Lima (2004) because I believe they may result in uptake and consequently L2 speech development in the mobile learning environment.

As far as research is concerned, Loewen (2013) suggested that no type of negative feedback has received more attention than recasts. This is confirmed by M. H. Long (2007) is explained by the fact that recasts are less obtrusive and offered immediately after the error which might facilitate noticing. Moreover, recasts may differ in length (Ellis & Sheen, 2006), prosody (Loewen & Philp, 2006), and number of errors corrected (Sheen, 2006); however,

they are all non-monolithic in nature and isolate the error mostly by providing declarative intonation. The example below illustrates recast in corrective feedback.

Example 2 (recast)

Student: *My sister is a driver. His name is Maria.*

Teacher: ***Her*** *name is Maria.*

Student: *She is young.*

Another rather frequently investigated type of feedback is elicitation. What we know about elicitation as a form of correction is largely based upon empirical studies that indicate its effectiveness. These studies have referred to elicitation as prompts (Lyster & Izquierdo, 2009) or negotiation of form (Ammar & Spada, 2006). In nature, elicitation is output-prompting as it encourages learners to self-correct without providing them with the target-like form. Vandchali and Pourmohammadi (2019), however, reminded us that learners must have some knowledge of language to self-correct. Current proponents of elicitation such as Amini, Alavi, Zahabi, and Vorster (2017) and Nassaji (2018) have additionally advocated that repetitions and clarification requests are simply forms of elicitation and should not be categorized separately as previously suggested by Lyster and Ranta (1997). However, I will refer to these feedback moves separately for a better understanding of their (in)efficacy in this study. The sample below is an example of elicitation:

Example 3 (elicitation)

Student: *There is a bed and a lamp in the bathroom.*

Teacher: *There is a bed and a lamp in…*

Student: *the bedroom.*

Although recasts and elicitations are output-prompting, they still rely on learners' capacity to notice the error and self-correct. In contrast, some types of error (and learners) require a more explicit feedback move. This explains why *explicit correction* adds to the list

of most frequently researched feedback categories (Naeimi, Saeidi, & Behnam, 2018; Nassaji, 2018). Scholars have observed that explicit correction might happen when teachers indicate that an utterance was incorrect or when they refer to metalinguistic terminology to mark the nature of the error. The effectiveness of this category is sustained by output-promoting advocators such as Swain, and De Bot. Interlanguage scholars agree with this conclusion by explaining that output that is modified or reprocessed represent a leading edge in learner's interlanguage (Swain, 2005). Despite its largely reported efficacy, explicit correction is clearly more disruptive to interaction and exposing to learners in the classroom. For this reason, scholarship has forewarned teachers about the importance to delay explicit correction for situations in which the learner is incapable of self-repair. This learner limitation to self-repair might result from several different causes such as interlanguage fossilization, negative emotions, or lack of knowledge in the target language (Sykes & Reinhardt, 2012). The dialogues below portray examples of explicit correction.

Example 4 (explicit correction as metalinguistic feedback)

Student: *I see four cars there last night.*

Teacher: *See – you need the past tense.*

Student: *I saw.*

Example 5 (explicit correction as indication of error)

Student: I go to school by foot.

Teacher: 'By foot' is not right.

Student: *On foot.*

In the examples above, correction was provided shortly after the oral error. This raises an issue about the timing of feedback. In this sense, a very common feature of negative feedback in research is immediacy. In that light, Nassaji and Kartchava (2018) explained that

negative feedback has been traditionally provided immediately or shortly after errors are committed. The advent of computer-mediated communication has sparked research in delayed negative feedback through technology. However, research in delayed feedback by means of virtual communication is still an uncharted territory with little scholarship (Ellis, 2017b).

In terms of timing of feedback and learner uptake, Nassaji and Kartchava (2018) explained that studies have come to an agreement that immediate feedback favors accuracy while delayed feedback fosters fluency. It is fair enough to note that immediate feedback has been preferred in a plethora of research (X. Chen, Breslow, & DeBoer, 2018; Epstein et al., 2002; Naeimi et al., 2018; Nassaji & Kartchava, 2018; Quinn, 2014; Scheeler, McAfee, Ruhl, & Lee, 2006).

One reason for that is because immediate feedback has more theoretical grounds. For example, Doughty (2001) hypothesized the existence of a "window of opportunity" in which the learners may map the form on the meaning that it conveys. This window would "open" while the learner is struggling to communicate providing for an optimum timing for correction. Lightbown (1998) also lends support to immediate feedback by theorizing a Transfer Appropriate Processing Hypothesis to which learning is context-dependent and, therefore, requires immediate correction so that leaners may associate form to the meaning where it is produced.

Another key issue on corrective feedback is more cognitive rather than linguistic: whether the interruption of communication to focus on a particular form interrupts the processing of meaning or not. The matter is whether this interruption inhibits learners instead of helping them. De Bot (2000) argued that meaning processing cannot be interrupted and Ortiz-Preuss and Rodrigues (2017) agreed to De Bot by stating that the interruption to focus on a specific language feature may engage learners into an even deeper processing of

meaning. The authors explained that although learners' performance is interrupted during reactive, immediate and direct negative feedback, their learning continues in the sense of information processing. However, it is still unknown, according to the authors, whether meaning and form can be processed together.

An importance consideration in this regard seems to be learners' proficiency. The capacity to notice errors, elaborate on correction, and attain satisfactory uptake has been associated to learners' developmental readiness (Mackey, 2013; Mackey & Philp, 1998). For example, Ammar and Spada (2006) suggested that higher proficiency learners are more ready for benefiting from feedback than lower proficiency learners. However, research has also indicated that prompts and other types of more explicit correction may be efficient with lower proficiency learners (Havranek & Cesnik, 2001; Trofimovich, Ammar, & Gatbonton, 2007). A special note to a study conducted by Li (2014) in which seventy-eight learners were divided into higher and lower proficiency groups. Two feedback types were randomly provided to participants – recasts and metalinguistic correction. Results indicated that the higher proficiency learners benefited from recasts much more than their lower proficiency counterparts. In contrast, metalinguistic correction showed positive effects on both groups. In other words, both groups demonstrated uptake from more explicit feedback while the more implicit type of feedback only worked for the higher proficiency group.

All these types of corrective feedback are primarily based on driving learners' attention to a specific language feature – from the most implicit recast to the most explicit metalinguistic explanation. Numerous studies have investigated the differential effects of these levels of explicitness in noticing, self-correction, and increased accuracy. In other words, research has extensively investigated the efficacy of feedback whether it is more implicit or more explicit. As comprehensive review of what we know so far is found in Sheen and Ellis (2011), Lyster et al. (2013), and Nassaji (2016) and is beyond the scope of this

section to report their findings. For that reason, I will briefly pinpoint the main results of our current knowledge on this topic as found in Nassaji and Kartchava (2018):

1. Noticing is more likely to happen in explicit negative feedback.
2. Uptake is more likely to occur when learners self-correct their errors following explicit prompts.
3. Output-prompting strategies such as elicitation and metalinguistic feedback are more effective than input-providing strategies such as recasts in terms of acquisition.
4. Negative emotions are a risk to the success of corrective feedback. Therefore, correction must be carried out carefully and respectfully.
5. Fluency is better developed through more implicit negative feedback strategies and delayed correction until activity has been completed.
6. Accuracy work benefits from more explicit negative feedback and immediate correction.
7. The choice of errors for correction should be sensitive to communicative goals and contextual features.
8. A variety of negative correction strategies should be conducted as opposed to only one or two.
9. Teacher should only correct if learners cannot self-repair or receive negative feedback from other learners.

The summary above attempts to generalize results of decades of research. Therefore, it is naturally reductionist and may undervalue forms of negative feedback that are more implicit and input-providing. Although overall research currently points to those directions, Lyster and Ranta (2013) arrived at the conclusion that using a variety of strategies – rather

than rely on just one or two – is the best way to both teach and carry out research in negative feedback which is what has been done in the present study.

Thus far, this chapter has described the fundamentals of negative feedback such as the definition of error and the types of corrective feedback as well has current guidelines for research and practicum. What follows is the relation between negative feedback and FonF as critical concepts for this study.

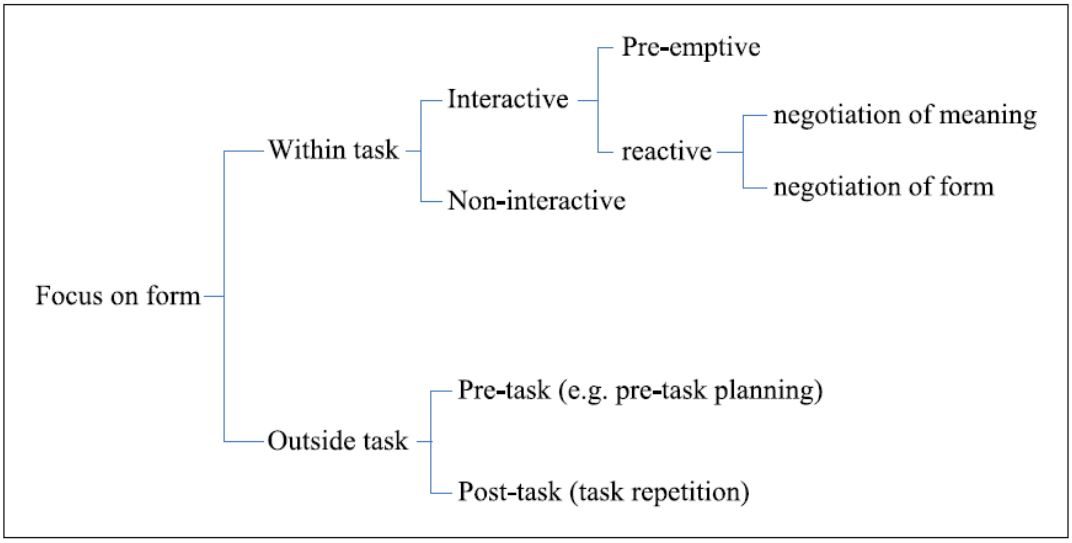
Negative Feedback and FonF

It is aforementioned that negative feedback brings its theoretical support from the notion of FonF. An example of this is the notion of noticing, a pre-requisite for the efficacy of negative feedback. In this brief subsection, I will explain how the literature relates negative feedback and FonF. Then, I will clarify how these two concepts will be important to this very dissertation.

To begin with, Ellis (2016) defined negative feedback as a 'reactive type of FonF' (p. 412). To explain better, negative feedback is an instructional intervention in which learners compare their L2 knowledge with the input provided when they err. Only after an error is made is negative feedback provided. And the manner that negative feedback is provided is by focusing on form (FonF).

The figure below was presented by (Ellis, 2016). It will be useful to provide a more visual understanding of the relation between negative feedback and FonF.

Figure 1. Negative Feedback and FonF



This figure demonstrates the different ways in which FonF may take place. Negative feedback is situated as a "reactive" type of FonF (as opposed to pre-emptive). It is also interactive and happens within a task. The figure also demonstrates that negative feedback may happen through the *negotiation of meaning* or *negotiation of form*. Lyster and Ranta (1997) clarified that negative feedback as *negotiation of form* is the "provision of corrective feedback that encourages self-repair involving accuracy and precision, and not merely comprehensibility" (p. 42). *Negotiation of meaning*, in contrast, refer to a primarily conversational functions in which learner and teacher focus on the content of interaction.

As a reactive type of FonF, negative feedback may be planned and based on the characteristics of proactiveness-reactiveness and targeted-general activities. Doughty and Williams (1998) explained that planning time for the intervention is a proactive action and executing the intervention is a reactive action – reactive because it depends on the error presented.

This is exactly how negative feedback and FonF will be brought together in my study: I have planned time for reactive FonF tasks in which negative feedback largely took place.

This will be much more thoroughly explained in the next chapter. For the time being, it is critical to understand the theoretical foundation for this choice which is what I now turn to.

Planning time for ‘reactive FonF tasks’ means that I reserved a moment in my instruction for remediating linguistic problems that were previously presented by learners. The FonF tasks, then, were designed to address linguistic items that I knew were problematic. For instance, recurrent misuse of irregular past tense would lead me to plan tasks that focused on that grammatical item. Learners would consequently make errors during the tasks and that is when negative feedback would be brought in. In this example, the tasks are a proactive action and the correction is a reactive action.

Doughty and Williams (1998b) further noted that proactive actions may be either targeted or general. Targeted when they focus on a particular language form and general when they do not focus on any language form in the planning. For instance, when the teacher assigns an activity with time for FonF intervention, he or she is being proactive. When this activity demands for a particular language use, it is proactive-targeted. Alternatively, "a general proactive focus on accuracy might be built into an activity in advance, as in the use of increased learner planning time, and instruction to attend to accuracy, without targeting any particular form" (p.34). In this study, however, all proactive actions were targeted.

Other studies have investigated the effectiveness of negative feedback along with other instructional interventions such as FonF. Results have not been very elucidating thus far. For instance, Lyster (2004) examined the combination of FonF and corrective feedback in the instruction provided by four teachers in their eight classes of 179 students altogether. Findings revealed that FonF is more effective when combined with prompts than with recasts or no feedback at all. That was found true for written even more than for oral correction. On the other hand, Lyster and Izquierdo (2009) reported no difference in the combination of

FonF and corrective feedback (also in the form of prompts and recasts). The authors investigated instruction provided to 25 undergraduate students of French as foreign language.

I chose to combine FonF and negative feedback in this study mainly because correction was provided through mobile communication. It was my understanding that this composition would boost noticing and consequently foster learner uptake.

Having defined the relation between negative feedback and FonF and well as its relevance to this dissertation, I will now move on to review the Sociocultural Theory as the essential instructional philosophy upon which negative feedback is addressed in my study.

The Sociocultural Theory in Negative Feedback

As mentioned previously, after their seminal work in 1997 and a plethora of other studies they conducted in negative feedback, Lyster and Ranta (2013) came to the conclusion that research and pedagogy should apply a variety of strategies for correction in a given context as opposed to one or two techniques. Advocators of the Sociocultural Theory (SCT) in negative feedback lend support to Lyster and Ranta's conclusion (Battistella & Lima, 2017; Ellis, 2017a; Li, 2013; Nassaji & Swain, 2000). The reason for that is because SCT points to the need for progressive correction of errors as well as the observation of levels of support. This was an example of how SCT and negative feedback come together. Nonetheless, before discussing this relation more broadly, I shall revisit Pegrum's summary of how SCT has been referred to by applied linguists (Pegrum, 2014).

The sociocultural approach to second language teaching, according to the author, is an umbrella that comprises eight other approaches as described below.

- *a socio-constructivist approach* (Lantolf & Poehner, 2014), which focuses on learners actively constructing knowledge in interaction with other learners;
- *a situated approach* (Clément & Noels, 1992), which focuses on learners co-constructing knowledge within a particular social context;

- *an embodied approach* (Holme, 2012), which takes into account the relationship between mind, the body and the environment;
- *an informal learning approach* (El-Koumy, 2004), which focuses on the kinds of incidental, tacit and situated learning that take place in everyday life;
- *a learner-centered approach* (Benson, 2012), which focuses on students' autonomy, agency and potentially their identity development, at which point this may blend into an identity approach.
- *an identity approach* (Norton & McKinney, 2011), potentially a more politicized version of a learner-centered approach that views language learning through the lenses of poststructuralism, critical discourse analysis and critical pedagogy, as it focuses on students' development of agency and identity;
- *an intercultural (communicative) competence approach* (Hosack, 2011) or *intercultural literacy approach* (Dudeney & Hockly, 2016), which focuses on students' interactions and negotiations with others from different linguistic and cultural backgrounds, potentially including the development of agency and identity in intercultural contexts;
- *an ecological approach* (Kramsch & Vork Steffensen, 2008; Van Lier, 2008) or *a complexity approach* (Larsen-Freeman, 1997; Paiva, 2006), which takes a holistic view of the complex, interconnected processes involved in language learning, and again emphasizes learners' agency and identity.

However different in perspective, all the approaches above converge to SCT and may be related to negative feedback. Interestingly, research in correction has clearly chosen a more interactional path to establish this relation. Therefore, Vygotsky's cruxes have been continually used to support corrective feedback, especially the concept of Zone of Proximal Development (Vygotsky, 1978).

The Zone of Proximal Development (ZPD) is virtually based on the interaction between a more competent person a less competent person on a task so that the less competent person becomes independent in completing such as task. In Vygotsky's own words, ZPD is "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer" (Vygotsky, 1978) (p. 86).

Aljaafreh and Lantolf (1994) originally brought this concept into corrective feedback by developing a "regulatory scale" that reflected the levels of explicitness in the correction provided to three L2 learners. For instance, having learners find and correct their own errors would be a more implicit strategy while providing the target-form would be a more explicit corrective technique. Results demonstrated that, as learners assumed increased control of the target language, correction tended to become more implicit. Other researchers have used this scale to investigate second language acquisition through corrective feedback and have concluded that providing correction within learners' ZPD was more efficient than providing it randomly (Nassaji, 2011; Nassaji & Swain, 2000). An important contribution of this discussion is the understanding that explicit-implicit is a continuum rather than a dichotomy.

Ellis (2009) advised caution on the use of ZPD, though. The author reminded that research has also found that learning is hindered when teachers fail to establish the intersubjectivity needed for a ZPD. This is exemplified in Hyland and Hyland (2019) where the authors highlighted a mismatch between students' goals in writing and teachers' goals in correcting their pieces. One of the mismatches reported was in the way a teacher corrected her student's vocabulary. The teacher advised her student to use simpler vocabulary to avoid making so many errors while the student wished to continue risking the use of more complex words as a learning strategy. Hyland and Hyland (2019) agreed with Ellis (2009) on this

piece of advice by recommending less teacher control and more attention to learners' own goals. This recommendation is more broadly found in Wertsch (1985), who expanded on Vygotsky's ideas and coined the term "strategic mediation". This term refers to an instructional interaction whose goals are situated in context whereas learners' agency is valued, and participation is sustained.

A final potentially influential feature of feedback is the amount of correction provided to errors. Before proceeding to discuss the mobile environment in which correction took place in this study, I will briefly turn to how current literature views the relation between learning outcomes and the intensity of feedback received.

Amount of Feedback and Learning Outcomes

The seminal work that launched the definition of focus on form by M. H. Long and Robinson (1998) never specified the amount of feedback needed for learning. Yet, research has consistently shown concern to that matter whereas quasi-experimental studies have ranged feedback sessions from one-time interventions to recurrent correction (Ellis, 2017a).

To illustrate, I would like to highlight a meta-analysis conducted by Li (2010) on the effectiveness of corrective feedback in the Applied Linguistics field. Altogether, Li retrieved 33 studies on corrective feedback, including published articles and doctoral dissertations. As far the amount of feedback provided, Li reported that treatments ranged from 30 to 120 minutes, being 50-60 minute feedbacks considered medium. Another meta-analysis was offered by Norris and Ortega (2000) had previously noted that the duration of treatments could range from 15 minutes to as long as one semester. Both authors, however, suggested that the amount of feedback have been mostly examined together with other variables, such as the type of error and other learner differences. Li, in that sense, suggested that research lacks studies where treatment length is investigated alone.

Havranek (2002) also presented interesting findings on this issue. After analyzing oral negative feedback in 207 learners, the author suggested that short corrections (one turn) are least successful. Contrastively, corrections involving 5 to 7 turns led to the best results while sequences involving more than 7 turns were less successful.

In sum, research related to the length and intensity of corrective feedback point to the fact that medium duration in more beneficial that shorter or longer amounts. The reason why the amount of feedback is not often examined alone is because, as Loewen (2013) explained, different linguistic items may require more or less correction. The author also suggested additional studies of other languages and linguistic structures.

In this study, the amount of feedback was given in consideration of the type of error committed and the phase of instruction (whether it was language presentation, practice, production, or remediation). The effectiveness of feedback here will be further discussed in Chapter 4.

It is very important to note that the facts about Negative Feedback that discussed here so far are mostly a primary result of face-to-face interaction. Several scholars have suggested that eye-contact and other elements of in-person interaction is a crucial condition for the success of correction (Breuch & Racine, 2000; Hernández Méndez, Cruz, & del Rosario, 2012; Mendez, Arguelles, & Castro, 2010; Yao, 2001). Notwithstanding the relevance of such interaction, communication through mobile devices has increasingly challenged research in second language acquisition. This raises questions about what this communication channel entitles and its relation to language learning which is what I turn next.

Mobile Learning

In Brazil, the 2000's witnessed a historical momentum in telecommunications which served as the springboard to 2010's revolution in the way we socialize, make business, study,

travel, order meals, and perform other routine activities. The mobile technology revolution is present in mostly all sectors of our society, changing the way we communicate. Cellular phone texting has replaced telephone calls, e-mails and personal visits. Mobile device recorded videos have been used to broadcast national and local news. Mobile applications have been used to record, transmit, and forward all kinds of events and information. This list could go on and on while new features and mobile applications are launched in the market, causing new changes in social communication as I write this paragraph.

Mobile and ubiquitous devices have lifted us out from the physical constraints of being embodied and out of the confines of an institutional world, causing a new social status of not being tied to the parochial. In other words, it has removed the seams of our physical location and face-to-face interaction to bring us to a ubiquitous status both geographically and – more importantly to this study – linguistically.

While discussing mobility in the multiscreen ecosystem, Pegrum (2014) explained that devices determine the use of language through the types of input and output they accept, as well as the types of manipulation they support on different platforms (or operating systems) and applications. In this way, mobile hardware (and their software) define what and how language can be used and learned through them.

To the author, mobile devices such as smartphones and tablets represent a convergence of separate devices. In other words, smart devices have vacuumed up the functionalities of multiple older or more narrowly focused devices such as voice recorders, pagers, telephones, cameras, camcorder, and desktops, to name a few. Web-based interaction has given room to app-based interaction.

This upheaval in communication and social interaction has changed education to the core. Scholars and practitioners have been energetically involved in finding ways to incorporate mobile technologies and bring m-learning into educational programs. This

section will briefly review the literature of m-learning and the presence of mobile technology in education in general. After that, an overview of mobile assisted language learning will be provided in addition to how it relates to corrective feedback.

M-Learning and its Key Terms

Educational technology has been presented with a solid body of scholarship in the past decades whereas e-learning (electronic learning) has become a well-established field (Clark & Mayer, 2016; Downes, 2005; Rosenberg & Foshay, 2002). Important terms have been coined to refer to aspects only present in the e-learning field, such as *synchronous learning*, *asynchronous learning*, *distance learning*, *online learning*, and *blended-learning* (Korucu & Alkan, 2011; Moore, Dickson-Deane, & Galyen, 2011; Sangrà, Vlachopoulos, & Cabrera, 2012).

Clark and Mayer (2016) defined asynchronous learning as e-learning that is available upon demand and designed for self-study while synchronous learning is instruction-led e-learning that is available at a fixed time. *Distance learning* is defined by the authors as any educational endeavor in which learner and instructor are physically apart and require some medium of distance communication. *Online learning*, on the other hand, is centered in the use of the Internet to access information and communicate. Finally, the authors define *blended learning* as learning that happens both online and face-to-face.

The advent of mobile technology brought a new educational field: m-learning (mobile learning). M-learning was formerly considered a sub-area of e-learning, since the two fields share enough common ground (Clark & Mayer, 2016). Pegrum (2014) explained that the m-learning field has progressively become an area of its own through new periodicals, professional organizations, and events dedicated to mobile-based education, such as mLearn (since 2002), International Association for Development of the Information Society (IADIS) Mobile Learning (since 2005), and Mobilearn Asia (since 2012), Mobile Learning Week by

UNESCO (since 2011), International Association for Mobile Learning (IAmLearn) (since 2007), International Journal of Mobile Learning and Organization (since 2007), and the International Journal of Mobile and Blended Learning (since 2009), to name a few.

The author also differentiated e-learning from m-learning by explaining that e-learning is originally dedicated to fixed technology which tend to separate from daily life while m-learning (and mobile technology) tends to connect learning to daily life. Pegrum (2014) also drew the difference between portable and mobile devices based on Puentedura (2010). Portable devices were defined as devices that are used in Point A, closed down, taken to Point B, and only then opened up for being used again while mobile devices are used throughout the way between Point A and Point B. Examples of portable devices are laptop computers and pocket-size projectors while mobile devices are represented by smartphones, e-readers, and tablets, for example.

Two other relevant concepts to the m-learning field is *affordability* and *affordances*. Although these two terms are intertwined, Pegrum (2014) explained that "*affordability* precedes *affordances*" (p. 7). *Affordability* is referred to as the financial capacity to purchase mobile devices. The author affirmed that affordability is still a serious problem in developing countries. *Affordances* is a much broader term. In mobile learning, affordances happen through the creation of new communication channels, learning environments, and the development of learners' communicative competence by reaching out to other elements present in their immediate context, including instruction, peers, and materials.

Place is a relative concept in m-learning. The use of mobile devices enables learners to access digital materials, digital communications and digital networks from whatever real-world locations they find themselves in. Accordingly, several sub-terms have been used to expand the broad "seamless learning" term, such as *contextual learning*, *situated learning*, *situated cognition*, *embodied learning*, *user-generated contexts*, *learner-generated contexts*,

and *context-aware approaches* (Aragão, 2017b; C. P. Chen, Wang, & Ieee, 2015; Dahbi, 2015; Greene, Yu, & Copeland, 2014; Kukulska-Hulme, 2013; H. Lee & Lee, 2013; Nicholas & Ng, 2015; Sekiguchi & Hashimoto, 2015; Torok, 2016).

In tandem with a new sense of learning location, a new understanding of time has emerged with m-learning. Conversational turns are constantly flickering in the back of real life with little episodes strung into chains of meaning throughout hours, days, or even weeks. Not only is interaction in a constant flicker, but also learning goes on in the background of mobile device users. The link between mobile communication and learning actually takes place when user-generated material and content are drawn into learning experiences. When that happens, learners establish their own learning context. For that reason, m-learning is usually related to personalization, individualization, and customization of learning experiences (Kukulska-Hulme, 2013; Pegrum, 2014). Clear examples of a personalized learning content with mobile devices are self-pictures, video-recording, voice recognition applications that are used in communication to establish a context of language use.

Mobile Assisted Language Learning

Mobile learning is "learning across multiple contexts, through social and content interactions, using personal electronic devices", said Crompton (2013, p. 4). Crompton's definition of m-learning is interestingly dichotomized into the individual and the social. Electronic devices that are personal, designed for individual use, are simultaneously responsible for social interactions across different contexts that connect individuals into a community of practice. Although apparently at opposite ends of the spectrum, individual and social turn out to be closely related in mobile learning. They come together through the use of language which, in turn, becomes a central element that enables mobile device users to interact and create their social clusters. If language becomes central, so does language learning.

For that reason, the field of Computer Assisted Language Learning (Chai et al.), through its mainstream conferences, journals and books, has increasingly included mobile technology in its purview, suggesting a continuity between fixed and mobile technology. However, the relation between m-learning and language learning is most neatly captured in the term *Mobile Assisted Language Learning* (O'malley & Chamot, 1990), coined by George Chinnery in his influential 2006 article, "Going to the MALL" (Chinnery, 2006). MALL differs from CALL in the same way that m-learning differs from e-learning. Although the two fields (m-learning and e-learning) share enough common ground, m-learning stands out by its unique characteristics as described in the previous section. MALL research has been built on these characteristics and presented second language academics and practitioners with new challenges.

Language teaching that is assisted by technology, whether it is CALL or MALL is critically affected by theories and approaches derived from second language acquisition and Applied Linguistics. Pegrum (2014) has offered a significant review of these approaches, by establishing a relationship between technology assisted language learning and three major approaches to language teaching: behaviorist, communicative, and sociocultural.

These approaches help us reflect on the array of perspectives that entail second language teaching. Accordingly, this reflection leads to the question as for to what extent can technology support the implementation of such perspectives. Mobile learning, likewise e-learning, has been extensively challenged to develop ways to secure effective language teaching by means of ubiquitous and seamless learning. Kumaravadivelu (2006) explained that our current *postmethod era* focuses on pragmatic competence – that is, learners' ability to interact appropriately both socially and culturally in given contexts – which is characterized by an eclectic combination of older approaches alongside with newer ones.

This eclectic view of teaching is also brought to MALL while scholars thrive to develop specialized applications and bring existing applications into second language teaching.

Pegrum (2014) brought another necessary contribution to the MALL field. Based on the eclectic perspective, the author suggested four categories for the use of MALL in second language teaching: MALL for content, MALL for tutorials, MALL for creation, and MALL for communication. The four categories progress in levels of interactivity and pedagogical sophistication, what leads to a potential increase in transforming second language teaching and learning. I shall now explain each category.

MALL for content refers to the use of mobile devices in learning by accessing information only. Although learners still benefit from the m-learning seamless and ubiquitous nature, mobile devices are solely used for content consumption. However simple in its definition, MALL for content allows for an extensive variety of possibilities. Language learners can access multimodal information, what provides authentic and rich exposure to the target language. This enriched language input can be either organized or unorganized, depending on the application used, combined with certain learner characteristics – such as level of autonomy, linguistic background, proficiency and cognitive levels. MALL for content is actually the basic use of mobile devices for language learning, since, in whatever task is performed for learning, learners need to access and interpret content. Examples of this category is the use of e-readers, dictionary apps, search engines, videos, podcasts, and the sort.

The very same applications used for accessing content may offer more sophisticated functionalities, driving us away for simple content consumption to the next category described by Pegrum (2014): MALL for tutorial. When content is layered around by behaviorist exercises, MALL can be used for pre-communicative language practice. These exercises are found in the form of grammar drills, quizzes, pronunciation patterns, practice of

language chunks, or dialogue repetition, for instance. Although MALL for tutorial is limited in the actual use of language, instructors can easily incorporate it into a more complete learning experience. Blended formats of language instruction are especially favored by this category of MALL. For example, learners may access and practice linguistic forms at their own time and wherever they please, and later on meet in the classroom to integrate their previous exposure to the target forms into collaborative tasks in order to develop communicative competence. In other words, MALL for tutorial has a place in establishing and reinforcing language foundations, preparing learners for sociocultural experiences in the target language. Additionally, MALL for tutorial, like its previous counterpart, does not require sophisticated technology and can be found in lower-end applications that are available both online and offline.

While content and tutorial MALL provide crucial benefits to language learning, they both need to be complemented if not superseded with integrative and communicative activities by another source. This higher level of language practice brings us to the next category of m-learning: MALL for creation. The sociocultural and communicative territory of language learning require better mobile devices, more connectivity, and more learner autonomy. In this category of MALL, there is more presence of constructivist practices as both teacher guidance and feedback build on learners' previous experiences and zone of proximal development. For that reason, creation MALL cannot be implemented at large scales whereas independent practice and automated learning are not supported. In this MALL category learners essentially produce their own content by performing higher order thinking tasks such as collaging, podcast recording, video recording, text writing, or drawing. Tasks like these can be performed either individually or collaboratively by students jointly writing or editing texts or entering blog posts. MALL creation tasks may go from simple to complex and reach the integration of language production and multimodal literacy. Pegrum (2014)

added code-literacy to this list by stating that learners may engage in building their own application software to showcase their personalized content. The author brought practitioners' attention to the fact that learners need to create content (or codes), not just reproduce ready-made templates and pre-existing frameworks. This level of m-learning supports learner agency and identity construction as students bring different aspects of their lives into self-made materials. Language, at this level, is a clear expression of self, favoring process-focused approaches, sense of authorship, and cognitive development.

This emphasis on self-expression, collaborative content, and authorship edges into the ultimate level of m-learning experience in language is suggested by Pegrum: MALL for communication. This level of MALL inevitably bounds up the previous three categories provided that learners need to access information, perform pre-communicative tasks, and create content before they can use mobile devices for communication. Interaction in this category may take place in a variety of ways: one-to-one, one-to-group, group-to-one, teacher-learner, learner-teacher, learner-computer, and computer-learner for example. All these modes of communication require interpersonal skills, authentic use of target language, motivation, autonomy, language background, and technological knowledge. Depending on the learning goal, different types of interaction and content can be used which will inevitably affect pedagogical decisions as for the type of activity and feedback. MALL for communication may go from reading that hubs for discussion and collaboration to social media networks that combine synchronous and asynchronous interaction in multimodal ways with various audiences.

For example, MALL for communication was held in Israel and conducted by Bouhnik and Deshen (2014). The purpose of the study was to explore classroom communication between teaching faculty and high school students using WhatsApp. Teachers and students communicated via WhatsApp for a school year with four main goals: send and receive

managerial information; develop teacher-student and student-student rapport; share personal information and everyday life experiences; and share instructional materials. Next, half-structured in-depth interviews were conducted with participating teachers who pointed out advantages and disadvantages of mobile communication for instructional purposes. Results indicated that the use of WhatsApp enhanced student participation and use of target language. The advantages were sorted out in three categories: technical (WhatsApp communication was faster than face-to-face or e-mail communication), educational (rapport was enhanced among students and with teachers), and academic (access to materials and increased participation in discussions).

The overall progression of the above categories in m-learning is from a behaviorist through a more communicative and sociocultural paradigm as MALL for creation and communication favor learner agency and identity. However, it is not uncommon for a single MALL activity to reunite both the behaviorist and the sociocultural perspectives, especially when mobile devices are used in a combination of distance and face-to-face learning.

Another key issue in MALL is language assessment. The intense content creation, language practice, and communicative engagement require feedback from teachers both during and at the end of the process. In order for assessment to be possible through mobile devices, Pegrum (2014) also suggested the use of *online platforms* that allow students to document their learning experiences and receive support from instructors. These platforms may be the mobile version of e-learning platforms such as Moodle or Teleduc, or applications designed for specifically for m-learning such as Outsystems and EduCause. Another way to enable feedback and assessment is through *e-portfolios* on which learners will display their work for evaluation and peer-feedback. Both online platforms and e-portfolios allow multimodal content, interaction, portability, and sustain all the other aspects of m-learning. In

addition, they allow a combination of teacher assessment, peer assessment, and self-assessment.

Undoubtedly, outside forms of language assessment can also be incorporated into either online platforms or e-portfolios. Conventional formative and summative tools may be applied into the language classroom and have their data entered on the mobile software for learning analytics and program results.

The uncharted territory of MALL challenges academics and practitioners on a daily basis. This brief literature review on this topic did not intend to include all the scholarship developed throughout the past two decades; however, it served the purpose to present the key-concepts and ideas that will be used to analyze the data of the present study.

MALL and Oral Negative Feedback

As mentioned previously, research that investigates the relation between the use of MALL for communication and the development of L2 oral skills has tended to focus on overall communicative competence (Bouhnik & Deshen, 2014) or (less frequently) on pronunciation (Campos & Freitas, 2016). Other ways in which MALL affects oral production have also caught the attention of scholars, such learner emotions (Aragão, 2017; Harley, Poitras, Jarrell, Duffy, & Lajoie, 2016), collaborative work (Kukulska-Hulme & Viberg, 2018), mobile gaming (DaCosta, Seok, & Kinsell, 2015), automatic speech recognition (S.-M. Lee, 2016), and augmented reality (Dirin & Laine, 2018; Nincarean, Alia, Halim, & Rahman, 2013), to name a few.

What is not yet clear is the impact of mobile communication in the efficacy of negative feedback for the development of L2 oral skills. Although Chinnery (2006), in his seminal work, did refer to a few applications of mobile devices that could be used for oral feedback with iPods, little have I found in the literature that has actually discussed this relation.

In an attempt to review scholarship that has related mobile communication and oral negative feedback, it is noteworthy to report what I have found in a tangential field: automatic corrective feedback.

Automatic corrective feedback has been reported in MALL for *tutorial*. One example of this is the master's thesis written by Kirinus (2018) at Universidade Federal do Rio Grande do Sul. Kirinus (2018). The author discussed the corrective feedback provided by three English as a second language learning applications: Duolingo, Babbel, and Busuu. Results indicated that all three applications essentially provided generic feedback, limited to identifying learners' responses as only correct or incorrect. Language use was described as substantially decontextualized and *not* communicative.

Duarte, Alda, and Leffa (2016) and Nunes, Leffa, Lopes, and Oliveira (2017) have also explored corrective feedback in Duolingo and Busuu respectively. They scrutinized the functionalities of the applications and how feedback was provided to users. Likewise Kirinus (2018), those studies indicated that the corrective feedback offered by Duolingo and Busuu are rather generic and do not inform learners of what the error was; they only recognize language use as either correct or not and shows the correct form of the sentence or word. Although all the three studies explored corrective feedback in current MALL for tutorial, none of them focused on speech production.

Although the studies mentioned above fall within the "opportunities for feedback" category or even under the "corrective feedback through mobile technology" umbrella, they do not explore oral negative feedback as an instructional focus on form through meaningful communication. I barely found this very type of negative feedback in only two studies on *Google Scholar* as of today (December 04, 2019). The first one is by Xu and Peng (2017) who explored mobile-assisted oral feedback through an instant messaging application called *WeChat*. In this study, thirteen Chinese as a second language learners were assigned

discussion topics over a semester and received either implicit correction in the form of recasts or explicit correction as metalinguistic feedback. Results indicated that corrective feedback was mainly overt correction with focus on structure. Although recast feedback was provided in small amount, it did not work well. The authors opined on this by affirming that recasts require more non-verbal communication. Another reason for the failure of recasts in that study was assumed to be the asynchronous nature of communication on *WeChat*. Recasts are supposedly more efficient in real-time communication, immediately after the error. Furthermore, the authors discussed learners' reaction to corrective feedback through the *WeChat* application. It was indicated that learners felt less anxious being corrected via mobile communication as opposed to face-to-face. In sum, participants' overall perception of mobile-assisted oral feedback was positive towards L2 development.

Xu and Peng (2017) also pointed out limitations of their study. First, the small number of participant constraints generalization of findings. Second, there was no teacher-interaction after feedback was provided being, therefore, impossible to verify learner uptake (attempt to improve) in L2 oral production. After all, the authors recognized that little is known about the value of MALL in facilitating oral corrective feedback and suggested future researchers to use a wider number of types of feedback and in a longer term.

The second study was by Caldas (2018) who compared two types of oral corrective feedback through *WhatsApp* in his master's thesis at Universidade Federal do Rio Grande do Norte. In that study, a group of 27 beginners received form-based feedback while a second similarly composed group received meaning-based feedback for two months. Results indicated that form-based instruction was more efficient than meaning-based. Likewise Xu and Peng (2017), Caldas (2018) also pointed out overall positive reactions by participants towards correction through MALL for communication.

The studies by Xu and Peng (2017) and Caldas (2018) are more similar to my research project, except that I have combined oral corrective feedback with FonF and explored a wider range of oral feedback types in a longer term.

The following and last section of this chapter will both recap the main topics covered in the last dozens of pages and build into the following chapter.

Closing Remarks

This road trip to theoretical avenues in L2 speech production, negative feedback, and mobile-assisted language learning has ended in the unsettling climate of unexplored ways and the desire to delve more deeply into the explored ones. In this chapter, I attempted to provide a brief although compelling taste of what oral corrective feedback through m-learning entitles.

First, this trip began with the territorial limits of our road exploration: oral production in second language acquisition. This multidisciplinary field was defined, described, problematized, and put into the communicative perspective. A deeper discussion was offered on pronunciation as a key element to L2 speech development.

The second section of this chapter adventured onto the bumpy – however exciting road – of negative feedback as a field of inquiry. Its core elements were situated in the light of this study such as the definition of error and the types of correction. These elements needed a theoretical framework to be translated into pedagogical interventions. To fill that purpose, I chose the Sociocultural Theory as the lens through which to see negative feedback. Aspects that affect success in correction were also outlined such as learner uptake, noticing, and the amount of feedback that is provided. In addition, I presented FonF as a broader label to negative feedback along with the importance of combining correction and remedial focus on form.

Notwithstanding the importance of this discussion, it eventually gave room to the educational environment of this study: mobile communication. To that end, mobile learning was introduced with its key definitions and MALL was discussed as a recently explored avenue. At last, I reviewed the boundaries of Applied Linguistics when L2 speech production, negative feedback, and MALL are brought together.

Therefore, the main goal of this chapter was to review the grounding literature and to establish the main concepts that will be needed for my study. The next chapter, in contrast, will turn to a whole different discussion. I will describe my research methodology and the elements that were part of this m-learning experimentation of negative feedback.

CHAPTER 3

METHOD

Restatement of the Problem

Second language oral development by means of mobile communication has been of considerable interest to SLA researchers, generating a substantial amount of research as discussed in chapter 2. So far, scholarship has been mostly interested in the effectiveness of m-learning, including MALL for communication, in the development of L2 speech by means of task-completion and interaction alone. Therefore, too little attention has been paid to the potential contribution of negative feedback in that very process. This indicates a need to understand the role of such feedback in instructed SLA, especially when it comes to L2 oral development.

As an attempt to contribute to this discussion, the major objective of this research enterprise was to investigate whether oral negative feedback facilitates or not L2 speech development in MALL. This main goal has been unfolded into specific objectives that were outlined in chapter 1 and are in due time repeated below.

a. To investigate noticeability of oral negative feedback through WhatsApp features.
b. To find the relationship between oral negative feedback and modified output (uptake) in the mobile learning environment.
c. To understand how the new sense of time and place in mobile communication affect oral negative feedback.
d. To determine what types of oral negative feedback appear to be more successful in this learning context.
e. To determine what types of error better respond to oral negative feedback through WhatsApp.

f. To determine whether oral corrective feedback through mobile communication leads to lasting improvement in L2 oral skills.

Having defined the problem and the research objective(s), it is now necessary to discuss the research methodology designed for this study. The following section will serve this purpose.

Research Design

Mobile learning has been conceptualized and studied by researchers around the world, in the past few years in myriad ways that entail a variety of frameworks and methods. In order to conduct this study, I have chosen more than one tradition of inquiry. I offer here a mixed method of both qualitative and quantitative traditions in the form of Classroom Research.

According to Creswell and Creswell (2017) the fundamental principle of mixed methods is that multiple types of data require different methods. In this study qualitative data will be used in addition to quantitative data, reflecting complementary strengths and allowing insights not possible when only one tradition of inquiry is approached.

When mixed-method research enters the second language classroom, it serves the purpose of exploring the relationship between instruction and language learning which frequently faces the mismatch between pedagogical intentions and plans of instructional institution, curriculum, teacher knowledge, resources, and the learner. In this sense, a largely descriptive and empirical type of qualitative research comes into play: Classroom Research.

In Classroom Second Language Research, scholars are interested in what instructional contexts can unveil about the language learning process. Williams (2013) characterizes classroom second language research by identifying three core elements: (a) the purpose is educational; (b) an instructor is present; and (c) more than one learner is present. The author additionally highlighted topics commonly investigated in this type of research, including –

but not limited to – teacher actions, student responses, classroom interaction, language output, and the relation between the classroom and the outside world.

Williams (2013) offered a more traditional understanding of the term "Classroom Research" by limiting it to the actual (and physical) space of learning present mostly in institutions. As for alternative contexts – including online –, the author suggested the term "*classroom-oriented research*". To the author, the former refers to the investigation of actual classrooms while the latter refers to studies that have implication for classroom learning but may happen in other instructional settings such as group case studies or studies of interaction between dyads. Another group of authors such as J. D. Brown and Rodgers (2002), Nunan (2005), and Stigler and Givvin (2017) understand that the term *classroom* covers a wide range of contexts, apart from the school physical walls, such as multi-media centers, small group tutoring, and – more recently – online instruction.

Notwithstanding different understandings of what *classroom* entails, it is a consensus in the literature that Classroom Research focuses on interactional and educational patterns. Another important unanimity in the field is that there is virtually no difference between actual classrooms and other settings in the investigation of such patterns. The reason for that is because the task, rather than the setting, has the greatest impact on learning and interaction (Brown & Rodgers, 2002; Duff, 2018; Williams, 2013).

Therefore, this study design falls within the category of Classroom Research as it exhibits the following characteristics.

(a) Its ultimate purpose was to investigate interactional and educational patterns.

(b) An instructor was present throughout the study

(c) A group of nine learners partook in the investigation.

Having characterized this study within the qualitative research umbrella, I will now move on to explain the quantitative design used to complement.

Context of Study

The development of oral proficiency in second language acquisition is challenging to any context where the target language is not widely spoken in the community. As stated previously, this investigation has been conducted in response to the difficulty faced by a group of Brazilian learners of English that urge to develop their oral proficiency as they work their path into TESOL.

These learners are enrolled in a TESOL undergraduate program at the Federal University of Para (UFPA), in the city of Soure, Pará. Soure is a 25-thousand-people town located on Marajo Island, a major island that lies in the estuary where the Amazon river empties into the Atlantic Ocean. Its tropical weather is home to rich wildlife and indigenous reservations. Although a dozen languages other than Portuguese permeate the region, English is (absolutely) not spoken anywhere.

In this scenario, our TESOL majors have an important mission to bridge the gap between this allure remote area and the rest of the world through the teaching of English. However, this program does not have enough faculty to cover all courses and relies on visiting instructors who come to teach for a short period of time. In order to make it possible, the coursework is offered by means of intensive sessions. Each course is held within a two to three-week period throughout a 4-month term. This educational model causes students to have limited despite intense exposure to the contents presented in each course.

The coursework aims at developing different types of teacher knowledge. One of them is the linguistic knowledge. Students learn to speak, listen, write, and read in English during seven skill-integrated English Language courses that turn out to be the only opportunity for students to develop their language skills. Likewise the other courses, the English Language ones are offered as intensive sessions that last approximately 21 back-to-back school days. Due to the fact that each one of the seven English language courses is

offered at the beginning of each term, it takes seven semesters to complete the L2 coursework. Consequently, there is a five-month gap in between the English language courses. The table below demonstrates how the English language courses are offered throughout this TESOL undergraduate program.

Table 3. English Language Courses

School semester	Opportunity to Develop English Skills
Semester 1 (21 days)	English Language I
	Five-month gap
Semester 2 (21 days)	English Language II
	Five-month gap
Semester 3 (21 days)	English Language III
	Five-month gap
Semester 4 (21 days)	English Language IV
	Five-month gap
Semester 5 (21 days)	English Language V
	Five-month gap
Semester 6 (21 days)	English Language VI
	Five-month gap
Semester 7 (21 days)	English Language VII
	Five-month gap

The table above shows that TESOL majors at Soure face long periods of no classroom instruction in the English language. Aside from the scattered English language courses that students take in the TESOL program, there are no other opportunities for formal instruction in English such as language institutions or after-class EFL programs in town where students

can affiliate to in order to develop their linguistic knowledge. The mostly rely solely on those seven English language courses offered during their program. This tremendous linguistic scarcity refrains those students from developing their communication competence in L2 speech.

An additional constraint suffered by these majors is the lack of materials on campus. For example, the English language collection is limited to a few textbooks that are seldom accompanied by CD-ROMs or other multimedia add-ons. There is only one 23-seat computer lab available for all students to access online resources. This computer lab has no headsets or microphones which deprive students from using voice features or oral communication websites. For that reason, all of the TESOL majors enter the program with little if not any knowledge in English whatsoever.

This array of different constraints leaves quite little room for oral development in the target language. However, great opportunities are disguised as impossible situations. In the midst of so many difficulties, one advantage is the fact that mostly all students own a smartphone that provides access and creation of multimedia content in addition to voice functionalities that can be used with social media applications. Access to internet connection is also affordable – even more with mobile data. Text messaging and the exchange of all sorts of multimedia information is then a reality that has changed the way college students communicate and access materials at Soure, especially through the WhatsApp application which allows the exchange of multimedia content including voice and video.

Therefore, the context of this study is the mobile environment created to learn and practice English oral skills during two 5-month windows when students would normally have no contact with the target language.

Before proceeding to elucidate how data was generated in this study, it is necessary to clarify who the participants were and the nature of their cooperation which is what the next section turns to.

Participants

Tripp (2005) explained that the effects educational research in a group are not limited to the interests of a single individual. They inevitably reflect on all members of a given context of study. For that reason, this type of research is always participative and results from a combination of efforts. In that light, the author clarified four different ways in which a group of individuals can become involved in a research project: (a) obligation; (b) co-opt; (c) cooperation; and (d) collaboration. When participants enter a given project by obligation, they are bound to an action or course of action either administratively, morally, or legally. This is the opposite of participation by co-opt. In this second category, participants are persuaded and given the choice to enter the project or not. Additionally, participation by cooperation and participation by collaboration share common ground. They are both voluntary. However, in the former, participants do as the researcher guides; in the latter, participants have equal responsibility over decisions and share ownership of the project.

In this study, the type of participation is identified as cooperation. Participants generously agreed to perform the role of learners and to complete the tasks assigned either individually or in groups. Although participants did not share equal responsibility over decisions with me as the researcher, there was enough room for collaborative settlements. Learners were given the opportunity to voice their opinions in between the treatment cycles which was extremely useful for adaptations and changes in upcoming research events.

The selection of participants to my study was based on purposeful sampling. Patton (2005) explained that purposeful sampling is a way to select based on characteristics of a population and the objective of the study. Therefore, this selection is essentially judgmental

and subjective. It is, however, useful in situations when it is not possible to include all possible individuals in a group. For this study, it was not possible to include all 194 pre-service teachers that are currently enrolled in the TESOL undergraduate program at Soure. A smaller group that could possibly represent the entire population of students had then to be targeted.

Patton (2005) also indicated seven types of purposeful sampling: (a) maximum variation/heterogenous; (b) homogeneous; (c) typical case sampling; (d) extreme/deviant case sampling; (e) critical case sampling; (f) total population sampling; and (g) expert sampling. For this research project, I chose the critical case type of purposeful sampling. In this type of sampling, participants are chosen based on the expectation that they will reveal insights that can be applied to other like cases.

From the perspective of participation as cooperation and the selection of participants as critical case purposeful sampling, I have searched for participants who fulfilled the following selection criteria:

a) To be regularly enrolled in the TESOL undergraduate program at UFPA-Campus Soure.
b) To be familiar with the WhatsApp application and its voice and text functionalities.
c) To have taken at least two English Language integrated-skills courses.
d) To own a smartphone.
e) To agree to participate in every activity of the research project.
f) To have access to internet connection.

In order to round up volunteers, I visited students in their home classrooms to explain the project and distribute an initial form (Appendix A) that they were supposed to fill out and return to me in order to apply to participate in the project. The initial form (appendix A) was used to recruit applicants and select participants for this research project. The items exhibited

in that form served to characterize the preservice teachers in terms of mobile technology user and English language learner. The quantitative data provided an overview of type of technological apparel applicants had access to, how they communicated through their cellular phones, how they used social media through mobile communication, and how they practiced English oral skills outside the classroom prior to the implementation of the project.

This initial form was handed out to interested applicants in the first two weeks of August and tabulated on August 16, 2017. After this two-week window, I had over forty application forms on my desk. The forms were screened which downsized my stack to 34 eligible applicants since 12 of them did not fully met at least one of the five criteria. Although 34 represented only 17% of the entire population of TESOL undergraduate students, it was still a large number of individuals to work with. Therefore, in order to narrow down to an even smaller group that had to range from eight to twelve participants, I needed to add three more criteria to the recruiting process:

a) Participation must respect an equal number of males of females in order to guarantee equal gender representation.
b) Participants must come from different locations around Soure for two reasons. First, that would allow geographical representation in the area. Second, participants would have to rely more on mobile communication to interact during the study.
c) Demonstrated experience with accessing, creating, and sharing multimedia content through social media on mobile applications. This type of previous knowledge would facilitate language tasks during the project and help focus on the benefits of mobile communication. This was verified after a short, however individual, interaction with the 34 applicants through WhatsApp.

After this second screening, I managed to reach a smaller number of 9 participants that fully met the criteria of my project: 5 females and 4 males. A few reasons supported my

decision to limit the project to a small group. First, I wanted to have a more in-depth investigation of participants which is possible with a smaller group (Patton, 2005). Another reason was that a small group would make it possible to monitor learners' individual progress throughout the implementation of the activity cycles. Finally, a smaller group would allow room for adjustments that would be harder to implement at a larger scale.

Selecting participants is also sensitive to ethical considerations. Participant's welfare is a key ingredient in qualitative research (Patton, 2005). In order to comply with ethical issues in regard to participants, I took a few important actions. First, I made sure participants understood the problem that was being addressed during my study. I was concerned that they knew why the other applicants had not been selected, the program-wide problem that the study was going to address, and the contextual factors that had motivated my research design. Second, I received written approval from the dean of the Campus, oral permission from the head of the English department, oral permission from my peer instructors, and written consent from each of the selected participants. A copy of the request for written permission from the dean of the Campus is in Appendix B. A copy of the written student consent form is in Appendix C.

Before the research began, I had a meeting with the selected participants in which I explained that all interviews, forms, questionnaires, and other collected data would preserve their identity and all personal information was confidential. Consequently, any names and personal data would be changed while I reported results. Additionally, I explained to participants that their involvement in the research was entirely voluntary and their performance would not affect their course grades either positively or negatively. I also stressed to participants that they were under no obligation to take part in any of the data-collection methods and that they could withdraw from the study at any time should they wish.

Finally, I discussed with students the potential benefits that their participation could bring to developing oral skills in English.

Ensuring that participants were adequately informed about research and their rights as participants fostered confidence about the project. Awareness of ethical issues led to a more thoughtful and ethical practice in my study. After this first ethical encounter, the selected applicants were invited to an orientation session where I explained the steps of the project. The next section will serve this purpose.

Data Elicitation Methods

Generating data in the second language field is a multidimensional task. The ultimate goal of data elicitation methods is to uncover information about leaner behavior or learner knowledge regardless of the context that teaching is implemented (Mackey & Gass, 2015). In order to understand how mobile communication can support the development of oral skills, I selected six data elicitation methods that were applied throughout the implementation of the instructional methodology used to foster L2 speech development in this very context: (1) preliminary oral test, (3) field notes, (4) focus group interviews, (5) and posterior test. Each data elicitation method will be described in the following sections.

Preliminary Oral Test

The test instrument is a common component of qualitative research. Before implementing the MALL instructional framework designed for this study, I decided to assess participants' current oral proficiency in English. This preliminary language test held two main goals: (1) to identify learning needs and language flaws and (2) to determine the start point in participants' oral skills.

To begin with, identifying learning needs and language flaws in oral proficiency was important to inform pedagogical decisions as for content and skills to be targeted during the implementation of MALL. Accordingly, the pre-test was based on linguistic items and their

use in oral communication. Since participants had all taken the first two levels of English at our TESOL program, the language forms and functions tested were the ones studied previously in those language courses. The oral skills assessed on the test were also the ones that participants had been previously taught. The decision to test what participants had been previously taught was made because the instructional framework in this study was designed to build on face-to-face instruction and expand learners' ability to communicate orally in English.

The second goal was to determine the start point in participants' oral command of English. Setting the start point was important to help measure the extent to which my teaching intervention would affect participants' linguistic knowledge and communicative competence.

After I had determined the linguistic items and the oral skills that would be assessed in this pre-test, I began designing the test itself. While creating the test, I bore in mind the three testing principles suggested in the second language assessment literature: validity, reliability, and washback (Bachman, 1990; Burns & Joyce, 1997; Celce-Murcia & McIntosh, 1991; Finocchiaro & Sako, 1983; Fulcher, 2014). Whilst these three testing principles were employed in oral testing, I understand they apply more generally.

In order to be valid, the functions (or topics), linguistic forms (grammar, vocabulary and pronunciation), and oral skills (e.g. conversation strategies) assessed in the preliminary oral test were based on the first two courses of English language offered at our TESOL program since this was a pre-requisite for participation in this project. The English language courses at the TESOL undergraduate program at UFPA in Soure are based on the *Touchstone* Second Edition series, published by Cambridge University Press. The series comprises four levels which are covered at UFPA/Soure throughout the seven English language courses

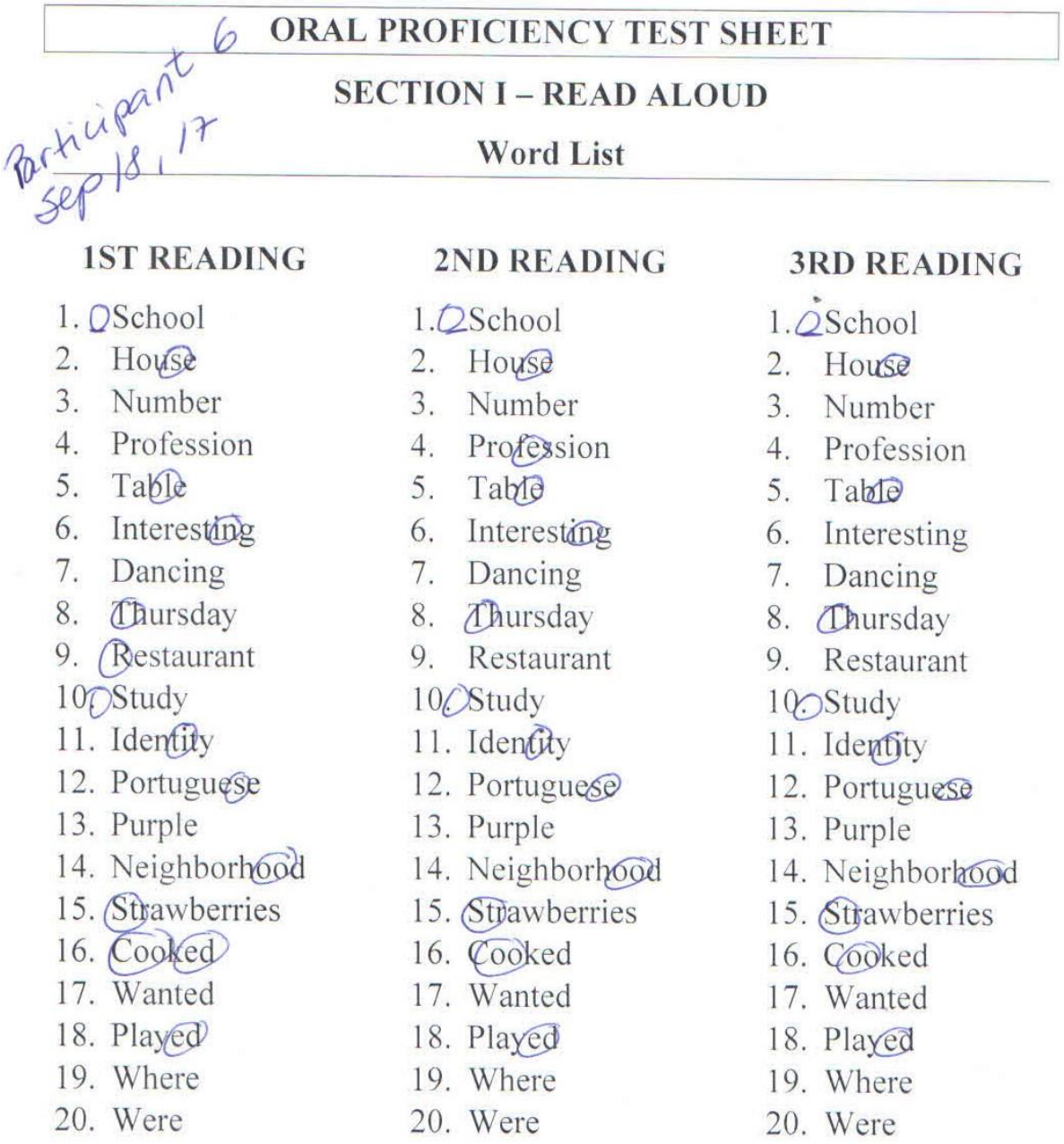
built-in the major in TESOL program. The first two courses of English cover the contents of the *Touchstone Level 1* (McCarthy, McCarten, & Sandiford, 2013), exhibited in appendix D.

After deciding on what to test (contents), the next decision was how to test. For that purpose, I based the oral test design on the current literature of oral proficiency testing research (Staples et al., 2017; Ulker, 2017; Umam, 2017). Therefore, the oral test was divided into two sections:

1. Read aloud
2. Social interaction

The Read Aloud section served the purpose to test participants' pronunciation at segmental and suprasegmental levels (Derwing & Munro, 2005; J. E. Flege, 1988b). Testees read a list of 20 words out loud. Next, they were invited to read 10 sentences out loud. Each reading took place three times in order to confirm recurrent mistakes. A copy of this section is in appendix E. Problematic segments and supra-segmental patterns were marked on the test sheet. The figures below demonstrate it.

Figure 2. Oral Test Sheet Marking, Section I



ORAL PROFICIENCY TEST SHEET

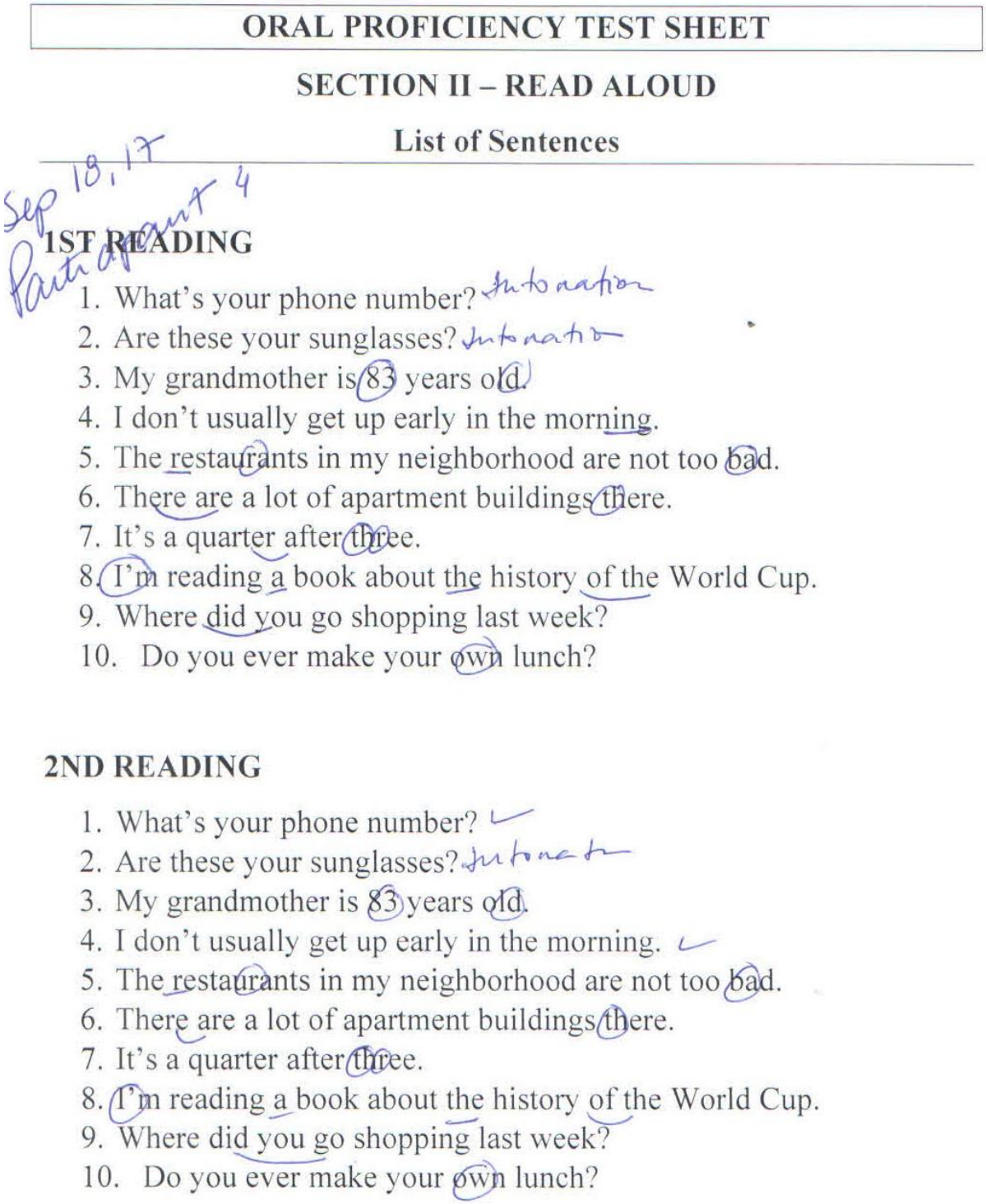
Participant 6
Sept 18, 17

SECTION I – READ ALOUD

Word List

1ST READING	2ND READING	3RD READING
1. School	1. School	1. School
2. House	2. House	2. House
3. Number	3. Number	3. Number
4. Profession	4. Profession	4. Profession
5. Table	5. Table	5. Table
6. Interesting	6. Interesting	6. Interesting
7. Dancing	7. Dancing	7. Dancing
8. Thursday	8. Thursday	8. Thursday
9. Restaurant	9. Restaurant	9. Restaurant
10. Study	10. Study	10. Study
11. Identity	11. Identity	11. Identity
12. Portuguese	12. Portuguese	12. Portuguese
13. Purple	13. Purple	13. Purple
14. Neighborhood	14. Neighborhood	14. Neighborhood
15. Strawberries	15. Strawberries	15. Strawberries
16. Cooked	16. Cooked	16. Cooked
17. Wanted	17. Wanted	17. Wanted
18. Played	18. Played	18. Played
19. Where	19. Where	19. Where
20. Were	20. Were	20. Were

Figure 3. Oral Test Sheet Marking, Section II



ORAL PROFICIENCY TEST SHEET

SECTION II – READ ALOUD

List of Sentences

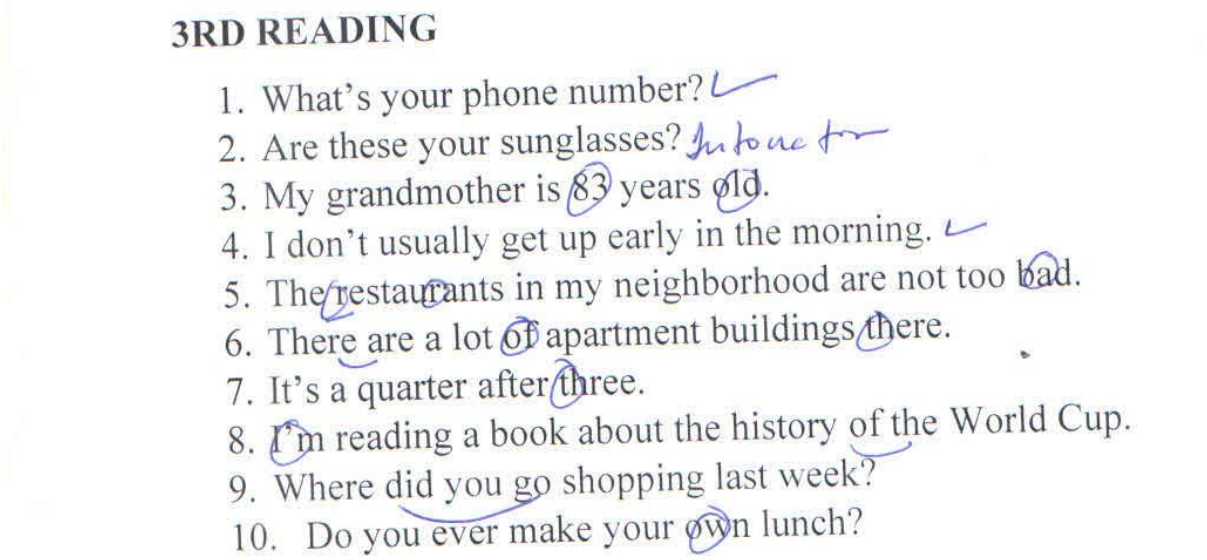
Sep 18, 17
Participant 4

1ST READING

1. What's your phone number? Intonation
2. Are these your sunglasses? Intonation
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?

2ND READING

1. What's your phone number?
2. Are these your sunglasses? Intonation
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?



3RD READING

1. What's your phone number?
2. Are these your sunglasses?
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?

The figures above exhibit the assessment of section I in which participants read both the word and the sentence lists out loud. I marked the mistakes on both segmental and suprasegmental levels. Mistakes in the utterance of individual sounds, stress, intonation, and rhythm were identified in the three attempts to read each list. That way, I managed to identify the most problematic sounds and key issues in prosody that could be potentially addressed in the treatment cycles of mobile-based instruction to come.

The second and last section tested participants' capacity to interact socially. Sandlund, Sundqvist, and Nyroos (2016) defined L2 oral proficiency as "the ability to converse with one or several interlocutors" (p. 16). This concept is based on the communicative competence seminally discussed by Canale (1983), previously presented in chapter 2 of this dissertation. During the social interaction of this oral test, participants were given the opportunity to partake in meaningful communicative interaction. This section included two tasks.

In the first one, the interaction took place between the testee and the tester. The tester asked a few questions from a pre-determined question bank and the testee had the opportunity to both answer the question and come up with a new one to be answered by the

tester. It is important to note that the question bank was based on the linguistic forms, functions, and conversation strategies presented in the *Touchstone 1* textbook.

In the second task, the interaction took place among the tester, the testee, and an invited interactant who was a more proficient EFL speaker. Either the tester or the guest interactant began the conversation by asking one of the questions from the question bank. Then, the others answered the question and were invited to continue the conversation in that topic however they felt comfortable. Both tester and guest interactant were trained to begin conversation from easy to difficult, following the sequence of questions outlined in the question bank. Appendix F exhibits the question bank used to initiate interaction in both two-way and three-way conversations. All questions were based on the 12 units of the *Touchstone Level 1* textbook.

After the test design was complete, the next step was to prepare an oral assessment rubric which followed upon Canale and Swain's work on communicative competence, in addition to the discussion on rating scales, tasks for second language speaking tests, test specifications, and assessment of oral proficiency found in Fulcher (2014). The oral assessment rubric designed for this preliminary test included communication competence as a central concern. Therefore, the following items were rated on a 0 to 10-point scale and mistakes were marked on the test sheet.

1. Segmental pronunciation
2. Supra-segmental pronunciation
3. Communicative competence

A copy of the oral assessment rubric is shown in Appendix G.

After the test was ready, I kindly requested for my TESOL colleagues to have a look and let me know if they thought the instrument looked professional and ready to be used. This was a way to assure face-validity.

Another important principle that I tried to assure was reliability. Fulcher (2014) explained that an oral test is reliable when more than one tester applies the test and results are similar within a small range of variation. In this case, I requested a peer English teacher with 14 years of experience in second language education. She kindly agreed to apply the oral tasks to the nine participants of this study after I had applied it. In order to verify the consistency of the marks, we also decided that we would test participants on different days. Therefore, I applied the oral test on September 18, 2017, and my peer teacher applied it on September 25, a week later. It is important to note that I did not share my results with her until after she had applied the test to participants and that both test administrations were tape recorded. After both administrations had taken place, my peer teacher and I revisited each recording and discussed a grade to be assigned to each participant by using the oral assessment rubric. It took two days before all recordings could be revisited and the preliminary oral assessment was complete.

This pre-test had an undoubtedly positive washback effect on pedagogy as it informed all instructional decisions that were taken while implementing MALL instructional framework. After both testers had their results in, we compared the information gathered from participants and I was able to plan the implementation of the instructional methodology. Overall results demonstrated considerable improvement in participant's capacity to communicate orally in English. Chapter four will provide in-depth discussion on this.

Field Notes

As previously mentioned, the instructional framework in this study had different stages. Each stage offered participants opportunities to engage in learning and developing their oral proficiency in English. For that reason, an important method for data elicitation during my study was the use of field notes. Patton (2005) explained that field notes represent

raw data of participant observation; therefore, it is recommended that researchers strive to write notes that are as complete and detailed as possible.

In the Applied Linguistics field, I made use of recommendations presented by Rodriguez-Lifante (2016) on how to gather field notes during an action research project. First, the author recommended that the researcher record events whenever possible, not to rely solely on memory or written information. Especially when taking notes is not possible such as in group sessions or classroom activities. Second, the author suggested that field notes be not limited the description of events; they should include an account of the observer's feelings, interpretations, and perceptions of events. A final recommendation that I made use from Rodriguez-Lifante (2016) is that field notes must be more descriptive than evaluative. Although, the author pointed out the importance of including feelings and interpretations, it was recommended that notes be predominantly concerned about describing the setting and actions instead of focusing on the evaluation that the researcher makes about them.

Unlike the other data elicitation methods, the field notes were taken at all times during this project – not in previously specified stages of the project. I wrote down notes about participant screening, preliminary testing, administration of group interviews, and every activity of the instructional methodology. Aside from writing down a description of the events at each instructional cycle, I took the time to reflect and add my personal interpretation of the facts as well as my perceptions of participants' involvement. My notes and the thought I dedicated to the events that took place during each step turned this project into a field of inquiry itself. Changes and new routes were definitely set out as a result of the cognition I dedicated to the experiences that emerged from the research field.

Focus Group Interview

According to Kelly (2003), the focus group interview is defined as an inquiry tool designed to "elicit perceptions, information, attitudes, and ideas from a group in which each participant possesses experience with the phenomenon under study" (p. 50). In other words, it is a research tool dedicated to reaffirming collective identity through which individuals of one cluster may express their opinion and results are a single response to the compilation of several voices. In that sense, Vaughn, Schumm, and Sinagub (1996) explained that focus group interviews address research issues that cannot be adequately investigated through individual interviews or survey measures alone. Learning journals provided me with individual perceptions while focus group interviews allowed me to see the larger-scale and reflect on necessary adjustments that would benefit the whole.

The assumptions that underpinned my decision to use focus group interviews were found in the qualitative research literature and are listed below.

a. People are invaluable sources of information and grouping allows them to negotiate meaning (Vaughn et al., 1996).
b. Adult learners are capable enough to express their feelings and perceptions, translating emotions into words (McLafferty, 2004).
c. Information obtained from a focus group interview is legit and reflects what individuals really think rather than conformity to what one or two dominant members believe (McLafferty, 2004).

Based on the assumptions and concepts outlined above, I performed seven group interviews. One after the completion of each instructional cycle. The dynamic I used to perform the interviews gave participants the opportunity to clarify and modify their ideas through discussion and challenge with one another. This collaborative environment also provided the opportunity for me to sense participants' commitment to their views.

In order for that to be possible, the seven focus group interviews were face-to-face discussions, led by myself as the facilitator. We arranged student desks at a circular fashion as I explained what I hoped to gain from the session. Interview sessions were held in Portuguese to allow full involvement and engagement by students. Participants then gave me their oral consent to be audio recorded and possibly transcribed into verbatim field notes. These direct scripts formed the raw data which I later analyzed and interpreted in order to report findings.

In order to conduct the interview, I had listed five questions prepared for a two-hour session. These pre-determined questions were used in the first hour and were followed by group-generated questions that filled the second hour. The questions I prepared were different at each focus group interview; however, they all resulted from my perceptions of learning journals, student participation in the instructional framework stages, and learners' demonstrated progress that were continuously documented in field notes. Examples of questions that were either planned or spontaneous during group interviews are as follows.

a) A correção oferecida no estágio de remediação foi clara e objetiva?
b) Quais os erros que vocês mais demoraram para corrigir?
c) Quais erros foram corrigidos com mais facilidade?
d) O que vocês faziam quando não entendiam bem a minha correção, mas achavam que precisavam dar uma resposta?
e) Quais as correções que mais ajudaram vocês a melhorar o inglês
f) Quais as correções que geraram mais dúvidas ou confusão?
g) Vocês tiveram ajuda de alguém para entender a correção e/ou responder a ela?
h) Vocês usaram algum recurso fora o nosso livro didático para corrigir algum erro cometido?
i) Quantas vezes vocês precisaram ouvir a mesma correção antes de respondê-la?

Although I had prepared a handful of questions for the interviews, there was time allotted for questions that emerged from participants. Therefore, this type of interview is classified as semi-structured (Kelly, 2003). My written list of questions served as a guide; however, there was freedom to digress and probe for more information.

In this study the facilitator and researcher were the same. I was also the instructor of the mobile-based teaching model. The benefits and constraints of this scenario will be discussed in the next chapter. For the time being, I limit myself to explaining that all the information that emerged from group interviews yielded specific data and helped me map participants' views, account for their experiences along with positive and negative feelings as well as set out new routes to plan the next instructional cycle of activity. While conducting interviews, I strived to maintain a discussion that was pertinent and inhibit topics not germane to the objectives of the study. Additionally, I did my best to assure equal participation by all group members and not allow one or a few members to dominate the discussion.

Posterior Oral Test

Mackey and Gass (2015) explained that one serious design issue is the comparability between preliminary and posterior tests. A more difficult posttest, for instance, might demonstrate little or no apparent improvement. For that reason, upon the completion of the seven instructional units of study, participants were subject to the very same speaking test that they had taken previously. Using the same test before and after the instructional intervention assured consistency and internal validity. Likewise the preliminary oral test, the posterior oral test was administered by myself and a week later by a peer teacher who agreed to collaborate with this project. Both administrations were held in June, 2018.

Hence, at the end of the implementation of the instructional cycle, participants scheduled their oral interviews and took the test demonstrated in appendices E and F. I cannot

stress enough how important it was to record the posterior oral assessment in the same way as the preliminary oral test. My peer teacher and I were able to revisit the posterior test recordings and compare them to the preliminary test ones in order to determine whether participants demonstrated any improvement in their oral proficiency in English and overall communicative competence after their MALL experience.

To sum up, the table below demonstrates the data elicitation methods used in this project, their corresponding goals and at what point in the project they were implemented.

Table 4. Data Elicitation Timetable

Data elicitation method	**Goal(s)**	**When data was collected**
Initial form	To select participants for the project.	August 01 to 16, 2017
Preliminary oral test	To identify learning needs and language flaws. To determine the start point in participants' oral skills.	September 18, 2017 September 25, 2017
Field notes	To record events. To inform changes and adjustments along the implementation of instruction.	From October, 2017 to June, 2018

Learning journal	To provide individual perception of participants' growing understanding and experience throughout the project.	From October, 2017 to June, 2018
Focus group interview	To provide general perception of participants' perception, attitudes, and ideas about the project.	After each cycle of activity: October 30, 2017 November, 2017 January 12, 2018 February 28, 2018 March 30, 2018 April 30, 2018 May 29, 2018
Posterior oral test	To assess learner's improvement in English oral production after instructional intervention via WhatsApp.	June 12, 2018 June 20, 2018

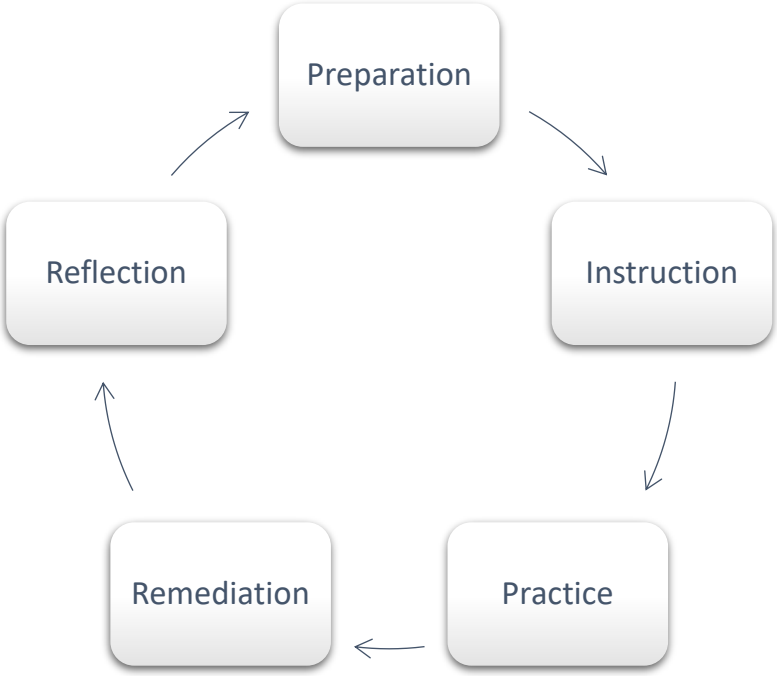
Instructional Methodology

After participants had been selected, oriented towards their participation in this project, and the preliminary oral test had been completed, I was ready to begin implementing the instructional framework. In this section, I will describe what this framework entailed as well as how and when data were generated during its implementation.

The instructional intervention aimed at providing opportunities for oral practice in English and the development of participants' communication competence. It was designed as a 5-Stage framework. This section will bring the description of each Stage, its general objectives, type of interaction between instructor and students, and examples of tasks that were performed. It is important to note that the seven instructional cycles were form-focused because their contents were based on the results of the pre-test. In other words, all cycles reflect participants' demonstrated weaknesses in both structure and function.

Each time that I conducted the instructional framework will be referred to as an instructional cycle, activity cycle or a unit of study which comprised the following Stages:

Figure 4. Instructional Cycle



This framework took in average four weeks to be completed and was repeated 7 times between October, 2017, and June, 2018. The table below demonstrates when each instructional cycle took place.

Table 5. Instructional Cycles Timetable

Instructional Cycle	Period of Implementation
1	October 02 – 26, 2017
2	November 01 – 27, 2017
3	December 04 – 16; January 04 – 11, 2018
4	January 17 – February 26, 2018
5	March 5 – 28, 2018
6	April 04 – 27, 2018
7	May 03 – 26, 2018

In order to begin the first instructional cycle, I created a WhatsApp group with the nine participants. All the whole-class group happened in this group. Additionally, I divided participants in smaller groups of 3 members. Each small group had their own WhatsApp group (to which I was not a member) and a group leader whose role was to make sure the tasks were performed timely and properly.

The goal was to facilitate collaboration among participants and the fulfillment of group tasks that were assigned throughout the project. A third WhatsApp group was created as an Administration group which included me and the three leaders of each small group.

The table below demonstrates the online groups created on WhatsApp for this project.

Table 6. WhatsApp groups created

Online group	Members	Goal
Main group	All participants and instructor	To implement the instructional cycle of activity (English-only).
Administration group	All participants and instructor	To address managerial issues and clerical work (Portuguese-only).
Small group 1	Only participants 1, 2 and 3	To collaborate while performing assigned group tasks (English and Portuguese)
Small group 2	Only participants 4, 5 and 6	
Small group 3	Only participants 7, 8 and 9	

All things in place, I was able to begin the implementation of the instructional cycles and each one of the 5 Stages they entailed.

Preparation

The first Stage of the instructional cycle was called “Preparation” which included two main foci: (1) to provide group orientation towards the entire instructional cycle and (2) to allow participants time to prepare for the activities of the cycle of activity.

To begin with, I had participants come together for a face-to-face preparation session. During that session, I introduced the objectives of the unit of study, the linguistic content, the target oral skill, interventional tools, assessment tools, tasks to be performed, and expected results. I also reinforced the importance of keeping a learning journal during the cycle which should be turn into at the reflection stage. For that purpose, I delivered a 20-minute slide presentation in Portuguese and cleared any doubts that arose. The total introduction session lasted 45 minutes in average.

After this introduction session, participants were given 4 days to look for resources such as grammar guides, textbooks, workbook, bilingual dictionary, and classroom notes that could potentially be of use during that unit of study. They were also encouraged to recap the

target content of the unit. The contents practiced during each instructional cycle are the same as the contents studied in the first two levels of English at our TESOL undergraduate program since the purpose of this project is to improve oral skills built on previous classroom experience. Therefore, I selected the units of study from the *Touchstone 1* textbook and used them at each cycle of activity. It is important to note that the contents selected from the *Touchstone* book were based on the needs indicated in participants' performance on the preliminary oral test.

The table below outlines the units of study that were selected from the *Touchstone 1* textbook. A full description of the contents of each unit is in appendix D.

Table 7. *Touchstone 1* Selected Contents

Instructional Cycle	***Touchstone 1* Contents**
1	Units 4
2	Unit 6
3	Unit 7
4	Unit 8
5	Unit 9
6	Unit 10
7	Unit 12

The preparation Stage lasted in average 5 days at each instructional cycle.

In order to provide a better understanding of the instructional methodology, I will describe the instructional cycle 3, "Shopping" at each one of its Stages, beginning with the Preparation Stage.

Preparation for instructional cycle 3: teacher and participants met on December 04, 2017, for the orientation meeting in which participants were presented the contents of the cycle based on unit 8 of *Touchstone 1*. Teacher presented the list of words, grammatical forms and conversation strategies to be used during the instructional cycle. In addition, teacher explained that this particular cycle would have an 18-day break for the end-of-year recess. The schedule of activities was then presented as follows.

Table 8. Schedule of Activities

	Stage	Time Period
1	Preparation	December 04 – 08, 2017
2	Instruction	December 09 – 16, 2017
3	Independent Practice	January 04 – 06, 2018
4	Remediation	January 07 – 09, 2018
5	Reflection	January 11 – 12, 2018

Along with the schedule, the teacher explained that the activities at each Stage would be the same as the two previous instructional cycles except for one activity that would be added in Stage 3 in which participants would interact in a synchronous way. Two participants reported difficulty writing their learning journal because they felt like they were being repetitive. They were explained that the learning journal is a way to reflect on their experience and it was OK to repeat information if they felt it was true. The orientation session ended and participants were encouraged to take the next four days to recap the forms and functions of the unit and prepare for the other four Stages.

Instruction

After the group was prepared to begin the unit of study, I began the second Stage of the instructional cycle, "Instruction" which lasted eight to ten days. This stage branched out into two sub-Stages: (1) instructional presentation (three to five days) and (2) instructional practice (five days). The instructional presentation had a two-fold goal: to raise learners' interest in the topic of the unit and to provide input for later language practice. In order to raise learners' interest, I exchanged voice messages with participants and sent multimedia content in order to activate their prior knowledge about the target linguistic form and oral skill. Second, I provided learners with linguistic input and conversation models by sending videos and audio materials along with memes and form-based contents. Although this was a teacher-centered stage, there was constant interaction with students through guided-questions. This first part of instruction provided both content and time for input processing while contextualizing target language in a meaningful way. Although I was furnishing learners with content that I had selected, they were free to look up into other sources of linguistic content that made more sense or seemed clearer to them. Considering that the major goal of this first part was to enhance participants' noticing of the target form, it included three main types of tasks: (a) noticing activities employing typographically enhanced texts, (b) awareness activities employing inductive rule-discovery tasks and metalinguistic explanation and (c) practice activities employing both analysis and fluency tasks. These types of tasks were based on Lyster (2004).

The second sub-Stage of Instruction was the instructional practice. At this sub-Stage, learners were assigned individual tasks through links to grammar and vocabulary websites, quizzes, drills, and other types of form-based oral activities. This sub-Stage included both oral and written activities since the purpose was to consolidate the linguistic forms and serve as a pre-communicative preparation. Although this was a more learner-centered moment, I

call it “instructional” because activities were guided, language use was controlled, and I provided ongoing and individual feedback to participants’ production. Local errors that were frequent and common to all or most participants were addressed in the whole-class WhatsApp group.

The table below lists the activities that were performed both to provide linguistic input and to practice the target forms pre-communicatively.

Table 9. List of Activities in Instructional Practice

Instruction Stage	**Examples of Activities**	**Type of Interaction**
Instructional presentation	Exchange of voice messages with questions to activate prior knowledge and contextualize linguistic form. Short videos with explanation of grammar. Pictures to illustrate vocabulary words. Conversation model with target linguistic forms. Memes to help contextualize target language use. Songs that included target forms to help begin a new topic.	Teacher – learner Teacher – learners Learner – learner
Instructional practice	Listen and repeat words.	

Conversation drills.

Sentence drills.

Match words and pictures

Listen and repeat questions

and answers.

Answer questions about song,

video or audio material.

Choose the correct word or

sentence to describe a picture.

All interaction was asynchronous. Participants were sent materials and voice-recordings by the teacher (with questions or instructions) and replied by recording their voices or posting an illustration (pictures, emojis). Although participants could always resource to writing when needed, they were encouraged to send audio replies as much as possible.

The following paragraphs describe the activities that were performed during the instructional presentation in cycle 3, from December 09 to 16, 2017.

Activity 1: Teacher sends the picture of a clothing store in Soure and records his voice with the question “Where is this place”? Waits for replies. Records “Yes, this is Belô Modas. I am right here for some clothes.” Then, teacher sends the picture of a few items on sale and asks “What are these clothes?” Waits for replies. Participants record their voices with the names of the clothes in the pictures. Teacher names clothes by writing and recording the vocabulary words. Participants listen and repeat the vocabulary words. Teacher asks “How much is this watch?”. Participants see the picture of the watch again and record their answer if they can. Teacher records the price of the watch and have participants repeat. The same is done with other clothing items.

Activity 2: Teacher records short videos in the store with the following question and answer:

"How much is this umbrella?" (asks while pointing to the umbrella in the store)

"It is twenty reais" (says while showing the price tag).

Teacher records one separate short video for each of the six items chosen from the store.

After that, participants say a complete sentence about each item. For that purpose, each participant sends a voice message with six sentences such as "The umbrella is twenty reais". All participants are invited to record their sentence about the six items.

Activity 3: Teacher sends a short video with two friends going shopping at a clothing store. Teacher asks participants to watch the video. Teacher sends recorded questions about the video to check for participants' understanding. Participants record their answers about the video.

Activity 4: Teacher sends the dialogue in written. Participants practice repeating the lines of the conversation in the video. This practice is completed individually.

Activity 5: Teacher send pictures of clothes and accessories. Participants reply to each picture by naming each item. Naming is done in the form of recorded voice message.

Activity 6: Teacher sends pictures of items on sale from the internet. Each picture includes the name of the item and how much is costs. Teacher directs one picture to each participant. Finally, each participant records their voice with a complete sentence about the item in the picture and how much is costs. For instance, teacher sends the following picture.

Figure 5. Sample Activity

Fernando records, “The belt is sixty-six reais and ninety-five cents”.

The six activities described above took place in an asynchronous way. This allowed time for the teacher to provide group and individual feedback on voice recordings.

This instructional Stage built background for the next stage of the activity cycle: Practice.

Independent Practice

While instructional practice was a moment for monitored language use, the Practice stage was a moment for independent language practice. To that end, I assigned students both individual and collaborative problem-solving tasks. All tasks were modelled and questions were cleared before students had to perform either individually or in their small groups. Collaborative tasks were negotiated and developed separately in the WhatsApp small groups. Directions for individual and collaborative tasks included a deadline for the presentation of their language production.

One main difference between the instructional practice sub-Stage and the practice Stage is the form of assessment. In the latter, assessment was formative while corrective

feedback was continuously provided during language practice. In the former, assessment was summative once feedback was not provided until after participants had completed the tasks and demonstrated their capacity to use of the target forms communicatively. The total length of the Practice Stage was 3 days.

The table below lists examples of activities that were performed both individually and in small groups to practice the target forms communicatively.

Table 10. List of Activities in Independent Practice Stage

Examples of Activities
Individual activities
Answer open-ended questions with personal information.
Create questions based on a picture, song or video.
Create memes along with a voice recorded caption.
Record videos with sound.
Send pictures along with a voice message.
Send selfies along with a voice description.
Record own voice singing parts of songs as karaoke
Post voice comments to online content
Create online content and send link on WhatsApp

Small group activities

Create a video with group conversation

Create group voice messages with shared responses

Record group singing

Send pictures along with group voice recording

Report group tasks through voice recording or video recording

Create online content and send corresponding link on WhatsApp

Create audio or visual material in other applications and share on WhatsApp

---

The Independent Practice activities were not limited to the list above. The choice of activities was a collaborative decision between researcher and participants based on the focus group interviews that happened after each cycle of activity, learning journals, and field notes that were generated throughout the project.

The following paragraphs describe the activities that were performed during the instructional presentation in cycle 3, from January 04 to 06, 2018. For this cycle, there were 2 individual and 1 group activity.

Individual activity 1: Teacher explains that we will celebrate the new year with a belated secret Santa. In preparation for that, each one will choose an item of clothing or accessory. Participants send a picture of what they would like to receive. The picture must be accompanied with a voice description, such as “I want a red skirt”.

Individual activity 2: Teacher draws participants’ names for the Secret Santa party. Then, teacher explains to participants that they will have to go online and look for their secret friend’s gift. They need to find it on three websites in search for the best choice. After that, participants post the three choices of gift on the WhatsApp group accompanied with a voice

caption such as “This red skirt is sixty *reais* on Magazine Luiza”. After all participants have posted their choices of gift, their secret friend will choose the one s/he wants to get by replying to the picture of the chosen gift.

Group activity: Teacher explains that small groups will explore clothing shops in town. Each group is assigned a different shop to go to. In the shop, groups will record a video that shows the items of their choice and how much they cost. Teacher explains that they should choose items that they would like to buy. Videos must show at least 10 items and all group members are required to appear on screen, describing products and how much they cost. All videos must be posted by January 06.

The negative feedback stage is what we turn next.

Remediation

After participants had individually and collaboratively produced oral language, I was able to provide them overall feedback on their linguistic performance. This end-of-process feedback was given both individually if there were isolated mistakes and to the whole group for mistakes that were frequent and common to most participants. The aim of this Remediation Stage was to improve oral communication by means negative feedback. This Stage lasted 2 to 3 days in average.

Corrective feedback was provided to all global errors detected during independent practice. Since negative feedback completely oral, the following steps were used to provide correction:

a) Tap and hold participants’ voice recordings.
b) Select the option “reply privately”
c) Tap and hold the microphone to start speaking.
d) Recorded a voice message with the negative feedback to the erroneous utterance
e) Send the voice recording to the student privately.

In compliance to the objectives of this study, only global mistakes were corrected. Corrective strategies were chosen according to the type of error observed (use of L1, phonological, grammatical, or lexical errors). And the type of feedback provided was chosen from the taxonomies presented in Chapter 2.

After correction was provided, the second part of the Remediation stage was to assign post-feedback tasks. These tasks were new opportunities for participants to perform the target forms in communicative tasks. The tasks performed here were exactly the same as the tasks assigned during Independent Practice – with small differences in contexts. For instance, the communicative task in Independent Practice would refer to participants routine on a given holiday; post-feedback task would refer to their routine on a Saturday. Procedural steps, however, were consistent in both stages. Remediation communicative tasks served as post-tests at every treatment cycle. Therefore, they allowed for comparative analyzes of how negative feedback impacted L2 oral development.

The entire form of interaction from Instruction to the Remediation was online through WhatsApp. In the next and last stage, participants had the opportunity to meet personally at a debriefing session about their experience.

Reflection

The icing of the cake. The Reflection stage was an opportunity to identify gains and losses, strengths and weaknesses, self-evaluate and set out new routes in individual learning decisions. For that purpose, a face-to-face meeting was conducted in the form of a focus group semi-structured interview. Participants were asked previously planned questions and could ask one another their own questions during a two-hour encounter. The information gathered from the learning journal and the group interview were used by the researcher to decide on changes for the next implementation of the instructional cycle.

The table below presents a summary of the five stages of the instructional cycle and brings the main pieces of information together.

Table 11. Summary of Instructional Cycle

Stage	Preparation	Instruction	Independent Practice	Remediation	Reflection
Description	Teacher introduces the objectives of the unit, tasks to be performed, learning strategies, interventional tools, assessment tools, resources, and expected results. Teacher also explains the data collection instruments that will take place (learning journals and group interview).	There are two instructional sub-stages. First, the teacher provides comprehensible input and scaffolding to learners (instructional presentation). Second, the teacher provides pre-communicative, form-focused, controlled language use for consolidation and assimilation	Students perform communicative tasks using target forms and oral skills. Language use is free.	Teacher focuses on problematic forms that hinder communication. Mistakes and errors are addressed as needed and interventional tools are provided for extended language practice.	Learners are invited to participate in a semi-structured focus group interview to debrief strengths and weaknesses and brainstorm areas of improvement.

		(instructional monitoring)			
Objective(s)	To provide group orientation towards the entire instructional cycle. To allow participants time to prepare for the activities of the instructional cycle.	To contextualize target forms and oral communication strategies. To provide comprehensible input. To monitor consolidation and assimilation of content.	To evaluate use of target forms and oral skills at discourse level.	To destabilize interlanguage phonologic and pragmatics. To prevent fossilization of errors and mistakes. To remediate the use of problematic linguistic forms.	To find solutions for individual and group learning difficulties. To develop learner autonomy and self-directness. To foster motivation through self-awareness.
Type of interaction	Face-to-face	Online	Online	Online	Face-to-face

Length	7 days	10 days	3 days	3 days	1 day
Assessment	***	Formative	Summative	Formative/Summative	***

Therefore, there were four data elicitation methods and seven instructional cycles throughout this research project. The table below presents a summary of the activities performed during the implementation of the study along with when each activity took place.

Table 12. Activity Calendar

	Activity Calendar	
Field notes	Initial form	August 01 to 16, 2017
		September 18, 2017
	Preliminary oral test	September 25, 2017
	Instructional cycle 1	October 02 – 26, 2017
	Focus group interview 1	27-Oct
	Instructional cycle 2	November 01 – 27, 2017
	Focus group interview 2	28-Nov-17
		December 04 – 16;
	Instructional cycle 3	January 04 – 11, 2018
	Focus group interview 3	12-Jan-18
	Instructional cycle 4	January 17 – February 26, 2018
	Focus group interview 4	27-Feb-18
	Instructional cycle 5	March 5 – 28, 2018
	Focus group interview 5	29-Mar-18
	Instructional cycle 6	April 04 – 27, 2018
	Focus group interview 6	30-Apr
	Instructional cycle 7	May 03 – 26, 2018
	Focus group interview 7	28-May-18

	June 12, 2018
Posterior oral test	June 20, 2018

The next section will describe how the data generated was analyzed.

Data Analysis

Data elicitation methods allowed me to see results both quantitatively and qualitatively. Quantitative data was generated after I tallied pre and post-test results and was able to come to an average score on both tests. This average score was possible by evaluating learners' oral performance before and after the form-focused instruction through the Oral Assessment Rubric. In addition to the average score on the Oral Assessment Rubric, I quantified participants' global errors made during the pre and post-tests and categorized them into four categories: use of L1, phonological errors, grammatical errors, and lexical errors. The average number of occurrences of such global errors per type of error are discussed in Chapter 4.

Another set of quantitative data was generated during the instructional cycles. I tallied every participant's occurrences of global error (per type of error) and built comparative charts that allowed me to see their oral performance before and after oral correction at each cycle.

Qualitative data was also an integral source of information for analysis. This type of data was mainly generated from focus group interviews. Participants comments, observations, reactions, responses, and complaints were systematized to support the analysis of negative feedback through WhatsApp.

Validity

My highest priority as a researcher is to provide validity to my study. This is important so that other researchers consider my study to be methodologically well-grounded. It is also important so that my participants will have confidence to share their experiences with me and

realize that I honor them and protect them from any negative effects of the research (Erlandson et al., 1993).

Erlandson et. al. (1993) have listed four criteria which are important to establish validity: credibility, transferability, dependability, and confirmability. In quantitative research these items are traditionally referred to as internal validity, external validity, reliability, and objectivity.

Credibility

Prolonged engagement is one technique that should be used to establish credibility. I have established prolonged engagement by choosing a context of study where I have lived and taught EFL for a number of years. My engagement in this context includes different experiences both as an instructor and as an administrator. For that reason, I have been a witness to the difficulties faced by students in the classroom and in the job market.

Persistent observation is a second technique for increasing credibility. I have incorporated this technique into my study by asking my participants about other sources of information that I had not initially considered as well as being aware of emerging sources of data in the course of my investigation. Alternative sources of information include the opinion of peer instructors about my participants' motivation, the opinion of non-participating students about my participants' engagement and apparent autonomy in speech production, and the voice of some school administrators who deal with the participants of this study in their workplace.

Triangulation is a third technique for increasing credibility in studies that address a complex issue as this one. Lincoln and Guba (1985) stated that triangulation is the preferred method to increase credibility of interpretations and the probability of findings. In order to tackle the issues raised in the research objectives, I triangulated my data sources and my data elicitation methods.

When taken beyond its conventional association with research methods and designs, triangulation can be done in four different ways (Mackey & Gass, 2015):

1) Data triangulation, which refers to gathering data through several sampling strategies and looking for the data to remain the same in different contexts;
2) Investigator triangulation, which refers to having more than one researcher to gather and interpret the data;
3) Theoretical triangulation, which refers to the use of more than one theoretical position in interpreting data; and
4) Methodological triangulation, which refers to the use of more than one method for gathering data.

In this study, I chose three out of the four methods listed above. To begin with, I used the data triangulation method as I verified whether speech production, student motivation and engagement was consistent throughout each cycle of implementation of the instructional framework. Second, I used the theoretical triangulation since some of my findings were discussed in the light of different theoretical models. For instance, I considered more than one perspective of motivation to analyze changes in the behavior of my participants. Third, I used the methodological triangulation since I applied several different data-collection methods: pre-test, posttest, field notes, and group interview.

Transferability

Patton (2005) stated the transferability is synonymous with generalizability in qualitative research or external validity in quantitative research. It is established when readers are provided with evidence that the study's findings could be applicable to other contexts, times and populations. Although this seems to place a lot of responsibility on qualitative research, Lincoln

and Guba (1985) explained that "It is, in summary, not the naturalist's task to provide an index of transferability, it is his or her responsibility to provide the data base that makes transferability judgments possible on the part of potential appliers." (p.316). In other words, Lincoln and Guba suggested that researchers provide thick description of the phenomenon so that readers may judge to what degree data can be applied to other contexts.

Another technique to achieve transferability is purposeful sampling (Palinkas et al., 2015) throughout the data collection process. One example of this is when I selected nine participants out of the tens of interested volunteers.

Dependability

Hinkel (2011) explained that when a study is dependable, it means that findings are consistent and repeatable. In that light, it was my aim to verify whether my findings are consistent with the raw data I collected. In other words, if other researchers have the chance to look at my data, they would be compelled to arrive at similar findings, interpretations, and conclusions. This is important to make sure that did not miss anything important or that my conclusions were not sloppy or misguided.

One way to achieve that is by conducting an *inquiry audit* or an *external audit* which is explained by Patton (2005) as the process of having an researcher outside of the data collection and data analysis examine the data collection, analysis, and results of the research study. Although I did not have formal participation of any outside researcher, I did have the opportunity to share my data with peer doctoral candidates at the institute where I conducted the study. One colleague in particular had access to several samples of my data as well as my preliminary analysis and provided me with invaluable insights to help build a stronger case of my findings.

Hinkel (2011) further explained that this technique does not imply that truth is fixed. It rather secures that reality was captured to a minimum degree of objectivity and which can be confirmed by an outside researcher.

Summary of the Chapter

In this chapter, the problem was restated along with the research objectives. The context of the study was exposed and the reasons that motivated the current project. Furthermore, a detailed explanation of the participants was offered in addition to an overall explanation about the nature of this research which is identified as a qualitative action research.

After that, the four data elicitation methods were introduced. All data elicitation methods provided unique contribution to generating information for analysis. Next, the instructional methodology was described and its five Stages were thoroughly clarified.

Finally, the data analysis was discussed with special attention to how the findings of this project were validated.

CHAPTER 4

FINDINGS AND RESULTS

The purpose of this chapter is to report the findings of this study by arranging generated data in a logical sequence in order to support further discussion. It is critical to note that the results reported here are not to prove anything, but rather cater to confirm or reject my previous assumptions and help shed light onto my research objectives as outlined previously.

For that reason, I articulated results in order to understand the problem from within, breaking data into pieces so that I could see the research problem from various perspectives. Accordingly, only critical data is provided and much of the raw data generated during the implementation of my project has been encapsulated into tables, figures, general statements, or represented by select quotes and excerpts.

In that sense, data was considered critical when it could illuminate my understanding of the research problem of this study. Basically, the problem posed was the potential of oral negative feedback in the development of L2 oral skills in this MALL study. TESOL majors in Soure – Marajo Island, Brazil – have very scarce opportunities to practice and develop English oral skills as a result of contextual constraints and poor educational background as explained elsewhere. MALL has come as a possible solution for this scenario and negative feedback may or may not serve to boost English speech development.

In order to report and discuss findings, this chapter has been divided into three major sections:

I. Pretest results

II. Results of Treatment cycles

III. Posttest results

All results have been tallied based on the occurrences of global errors, the type of oral correction provided, learners' reaction to correction, and the presence of L2 oral uptake. The form of oral English targeted in this analysis was the one presented in the *Touchstone* textbook.

In order to discuss results, I will interpret and describe the significance of findings vis-à-vis what is already known about the research problem being investigated. The interpretation of findings will be based on the theoretical frameworks discussed in Chapter 2.

Ultimately, findings may or may not generate claims that can be applied more generally. Additionally, comprehensiveness of such hypotheses might be proved or disproved in subsequent research. In any case, these emerging conclusions may be framed as new research questions. Also, in order to protect participants' identity, students will be referred to as P1, P2, P3, P4, P5, P6, P7, P8, and P9.

Without further ado, I will now turn to the first section.

Preliminary Test Results

Pre-test scores were tallied based the Oral Assessment Rubric (appendix G). As explained in Chapter 3, the pre-test was administered twice. The first one by me and the second one by a peer teacher who agreed to contribute to this study as an L2 speaking assessor. The table below demonstrates an average from both pre-test administrations, considering that the maximum score possible was 10 for each criterium.

Table 13. Pre-Test Oral Assessment Rubric

Segmental Pronunciation	**Average Score**
Vowel production was intelligible, and mistakes did not hinder communication.	6
Segmental consonants and consonant clusters were intelligible, and mistakes did not hinder communication.	7
Supra-segmental Pronunciation	
Intonation was meaningful and accurate.	7

Word and sentence stress contributed to convey the message.	6
Rhythm was well-paced and speech was smooth.	6
Communicative Competence	
Speaker demonstrated knowledge of syntax rules, vocabulary words, and morphological constituents.	2
Speaker demonstrated the capacity to comply with social rules and contextual demands to use grammatical forms.	4
Speaker demonstrated the capacity to comply with rules of politeness.	5
Speaker demonstrated coping strategies which compensate for linguistic and social constraints and keeps communication going.	3

The table above displays the average score that participants had on the pre-test. These views surfaced mainly in what aspects of L2 oral performance participants needed more attention. Results demonstrated that the highest scores were in segmental and supra-segmental pronunciation and the lowest scores were in communicative competence. Considering that 10 was the highest score, participants still needed to work on their level of pronunciation. However, participants demonstrated even more room for improvement in their ability to convey ideas, form full sentences, and use appropriate vocabulary in compliance with social demands.

Since this pre-test was based on the 12 units of the *Touchstone 1* textbook, I still needed to select the contents that required the most work. Additionally, it was imperative to tally results per type of global error to enable future analysis of how correction influenced learners' performance at the end of the study. Hence, the tables below exhibit the average number of global errors made at each section of the pre-test.

Table 14. Pre-Test Read Aloud Section

READ ALOUD	
	Phonological Errors
Section	**Average**

Word list	8
Sentence list	10

Table 15. Pre-Test Social Interaction Section

SOCIAL INTERACTION					
Unit	**Phonological**	**Grammatical**	**Lexical**	**Use of L1**	**Average**
1	8	8	8	7	***8***
2	7	10	9	7	***9***
3	7	8	9	8	***8***
4	8	11	9	11	***10***
5	6	12	10	10	***11***
6	9	12	10	8	***10***
7	11	15	11	15	***14***
8	9	10	13	15	***13***
9	8	14	12	13	***13***
10	8	14	8	11	***11***
11	5	8	10	8	***9***
12	8	10	11	10	***10***
Average	***8***	***11***	***10***	***10***	

The tables above tentatively suggest that participants demonstrated more difficulties in articulating words and sentences than in realizing sounds during the pre-test. The type of error with the highest number of occurrences was grammatical, followed by lexical and the use of L1. Phonological errors were still very recurrent, although less than the other types.

Moreover, the average number of global errors per textbook unit indicates what contents were more problematic which allowed me to select the target forms to be treated and corrected during each treatment cycle. Therefore, the target forms selected were as follows.

Table 16. Selected Target Forms

	Textbook Unit	**Target Grammar**	**Target Vocabulary**
Treatment Cycle 1	4	Simple presente	Everyday activities
Treatment Cycle 2	6	There is/There are / Telling time	Neighborhood places / Expressions of time

Treatment Cycle 3	7	Present continuous	Seasons / Weather
Treatment Cycle 4	8	How much / This, that, these, those	Clothing and accessories
Treatment Cycle 5	9	Can / Can't	Sightseeing activities
Treatment Cycle 6	10	Simple past	Regular / Irregular verbs
Treatment Cycle 7	12	How much / How many	Foods

The forms identified above were targeted throughout seven treatment cycles by means of form-focused instruction as described in Chapter 3. The next section will analyze the role of negative feedback in the treatment of those forms from the data generated by field notes and focus group interviews.

Treatment Cycles

Communicative oral production was very intense during independent practice at every treatment cycle. As a consequence, learners exhibited a variety of errors that frequently hindered intelligibility. When errors did hinder communication, they would become material for negative feedback and further practice.

Accordingly, despite all the language input, scaffolded content, and instructional practice provided at earlier stages of the treatment cycles, participants still made global errors during independent practice – be they phonological, grammatical, lexical, or for the use of L1. These errors were remediated by corrective strategies and then tested in new communicative tasks to verify learning as previously explained in the chapter 3.

Therefore, one way to examine the role of negative feedback in this study is by comparing the amount of global errors observed before and after correction. The table below indicates when global errors were made and when negative feedback was provided.

Table 17. Timing of Negative Feedback

Treatment Cycle Stages					
	Instruction			Remediation	
Preparation	Instructional presentation	Instructional practice	Independent Practice	Correction	Post-feedback tasks
			↑ Global errors ***before*** treatment		↑ Global errors ***after*** treatment

The occurrences of global errors were tallied by error type in the seven treatment cycles implemented throughout the study. In order to verify the role of negative feedback in this study, I will use these three major indicators of effectiveness as suggested by Loewen (2013):

(a) Learning

(b) Noticing

(c) Uptake

Learning will be verified by the amount of global errors observed before and after correction. Noticing will be assessed by how learners responded to feedback strategies while uptake will be examined by analyzing the modified output in participants' responses.

Learning

The purpose of this section is to verify to what extent (if any) oral negative feedback contributed to participants' L2 speech development. In order to investigate that, this discussion will examine how different types of error responded to different types of feedback as well as the impact of seamless learning on both receiving and providing correction.

Evidence for this analysis has been found in the oral activities that occurred during communicative tasks in two stages: independent practice (before correction) and remedial stage (after correction). Remedial tasks served as post-test since they basically replicated what

participants had done during independent practice. In other words, the forms targeted (be they morphological, grammatical, or phonological) as well as the type of activity assigned prior to correction were the very same before and after negative feedback, since it all belonged to a single unit of study.

This discussion has been organized by types of error and what follows is an analysis of errors that resulted from the use of participants' native language.

Use of Language 1

The first type of error to be analyzed is the use of L1. Although using L1 might be an important communication strategy for compensating holes in the interlanguage, its use may interrupt communication in L2. In this study, this interruption happened when learners either used Portuguese words to complete their ideas or used Portuguese fillings in their English language sentences, as exemplified below.

Excerpt 1 from treatment cycle 1 (use of Portuguese words)

Utterance in independent practice:

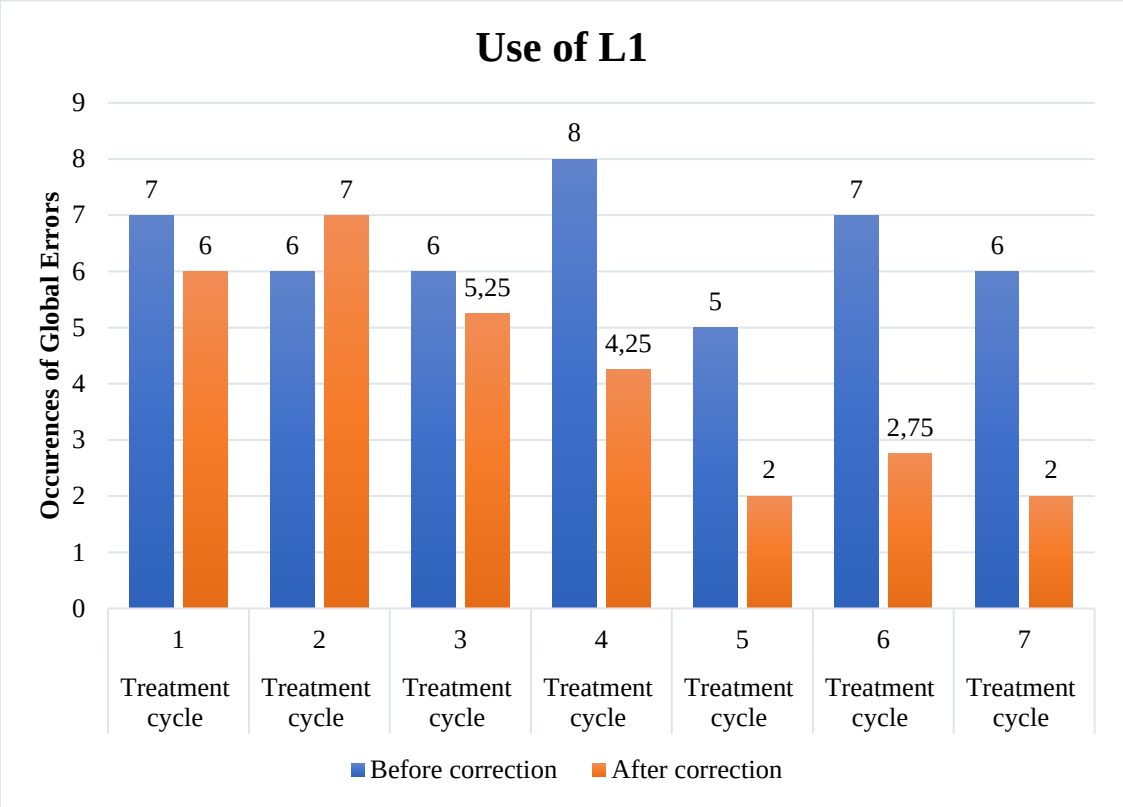
P2: *I...fico no celular....all day.*

Excerpt 2 from treatment cycle 3 (use of fillings)

P4: *It's…como é mermo...raining today a lot!*

Bearing this in mind, let us observe the graph below. It displays the average number of times this type of error occurred in the group before and after corrective feedback was provided at each treatment cycle.

Figure 6. Use of L1



According to the graph, in treatment cycle 1, communication was hindered by the use of L1 seven times in average during the independent practice stage. Then, remediation took place through either input-providing or output-prompting strategies. After remediation, this type of error occurred six times in average during the post-feedback communicative tasks. I should remind that the tasks assigned after remediation were similar in length and difficulty to the pre-feedback tasks. Yet, there was hardly no improvement whatsoever.

If we note the second treatment cycle, the occurrences of errors even increased after correction while it decreased very slightly in treatment cycle 3. These were unexpected results.

The samples below exemplify how correction took place in cycles 1 to 3.

Excerpt 3 from treatment cycle 1 (use of Portuguese words):

Utterance in independent practice:

P2: *I...fico no celular....all day*

Negative feedback in remediation stage:

Correction: *I **stay on my phone** all day*

P2: *Yes…OK!*

Excerpt 4 from treatment cycle 3 (use of fillings):

Utterance in independent practice:

P4: *It's…como é mermo...raining today a lot!*

Negative feedback in remediation stage:

Correction: *It's raining a lot today?*

P4: *(no answer).*

The samples above demonstrate unsuccessful corrective feedback. In both excerpts, I used recast as a an input-providing corrective strategy. They were unsuccessful because, in excerpt 3, P2 only confirmed receiving my feedback, not reproducing the corrected form. In excerpt 4, P4 did not reply anything, which does not demonstrate any noticing or learning, although my feedback was intonated as a question. In sum, I used predominantly recast in the first three treatment cycles to unsuccessfully correct the use of L1.

In order to interpret such result, I revisited the theory and found in the article "Factors Affecting the Success of Corrective Feedback" by Havranek and Cesnik (2001) a possible explanation: participants might not have been developmentally ready to notice recasts in that type of error. Therefore, I addressed that issue in group interview 3 and participants' response can be seen by the excerpts below.

Excerpt 5 (P3, group interview 1):

Professor, eu pensei que o Sr. estivesse só me mostrando o certo mesmo, mas sem esperar que eu falasse alguma coisa depois.

Excerpt 6 (P6, group interview 2):

Eu sei que eu falei português no meio da frase porque estava com gente me olhando gravar o áudio. Mas, como depois eu terminei a frase normalmente, pensei que tinha acertado. Aí o Sr. mandou aquele áudio repetindo a minha frase, eu até pensei que tinha gostado do que eu falei!

The excerpts above demonstrate that learners did not notice they were being corrected, let alone fix their utterance after correction. The lack of noticing reported in the group interview and the insight from the article led me to try a more explicit, output-promoting type of feedback with this type of global error. Consequently, I started to apply metalinguistic feedback and elicitation in treatment cycle 4. The excerpts bellow illustrate this.

Excerpt 7 from treatment cycle 4 (use of Portuguese words)

Utterance in independent practice:

P3: *How much is these…óculos de sol?* (instructional practice)

Negative feedback in remediation stage:

Correction: *How do you say "óculos de sol" in English?*

P3: *Sunglasses.*

Correction: *Repeat that sentence in English, please.*

P3: *How much is these sunglasses?*

Excerpt 8 from treatment cycle 5 (use of fillings)

Utterance in independent practice:

P7: *Can I…vê aí, Felipe!...eh... visit…é isso?... a zoo in Soure?*

Negative feedback in remediation stage:

Correction: *Say that again, only in English.*

P7: *Can I visit a zoo in Soure?*

Looking back at the graph, cycles 4 through 7 exhibit a steady decrease of occurrences in global errors for the use of L1 after negative feedback because learners responded better to explicit output-promoting strategies.

It is critical to note here is that the current literature in Classroom Research already knows that uptake is more likely to occur when learners self-repair following explicit prompts in face-to-face settings (Nassaji & Kartchava, 2018). In this study, it showed to be also true in MALL.

To explain better, the fact that mobile communication is asynchronous, and interaction is deprived from body language, did not seem to interfere in the benefits of output-promoting strategies. This demonstrates that this type of feedback strategy is likely to succeed regardless of on-time intervention and learner attention might not necessarily rely on eye-contact or other elements of face-to-face interaction as previously suggested by some scholars (Breuch & Racine, 2000; Hernández Méndez et al., 2012; Mendez et al., 2010; Yao, 2001).

This subsection has discussed that global errors caused by the use of L1 were a result of participants' attempt to either complete their ideas or need to fill in silence gaps in their turns. Noticing correction was a major challenge for error treatment here. After more explicit negative feedback strategies were applied, participants started to avoid using their L1 in English utterances.

If applying more explicit negative feedback was an important decision to treat errors caused by the use of L1, this raises a question as for how other types of error responded to that shift in corrective strategy. The following is a discussion on how oral negative feedback affected lexical errors.

Lexical Errors

Another frequent type of error in treatment cycles was lexical. This can be demonstrated in the samples below.

Excerpt 9 from treatment cycle 2

Utterance in independent practice:

P1: *I go sleep in* ***noon****.*

Excerpt 10 from treatment cycle 3

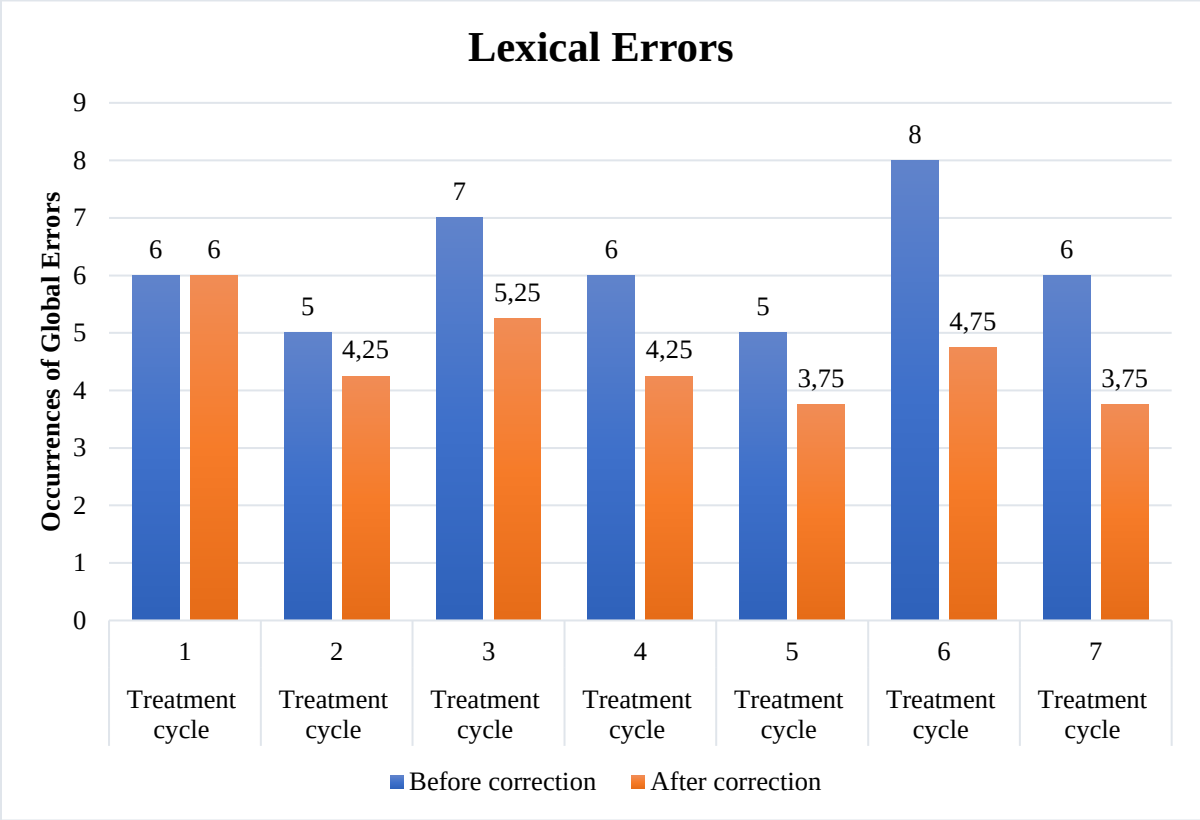
Utterance in independent practice:

P5: *My brothers* ***do*** *soccer in the night.*

In the excerpts above, P1 meant that she goes to sleep at midnight while P5 meant that his brothers play soccer at night. I should note that these excerpts also contain grammatical errors in the use of preposition – "in noon" instead of "at noon" and "in the night" instead of "at night". However, I consider those grammatical errors local errors since they would not hinder communication alone. The misuse of "noon" instead of "midnight" and "do soccer" instead of "play soccer" affected communication, therefore, deserved intervention.

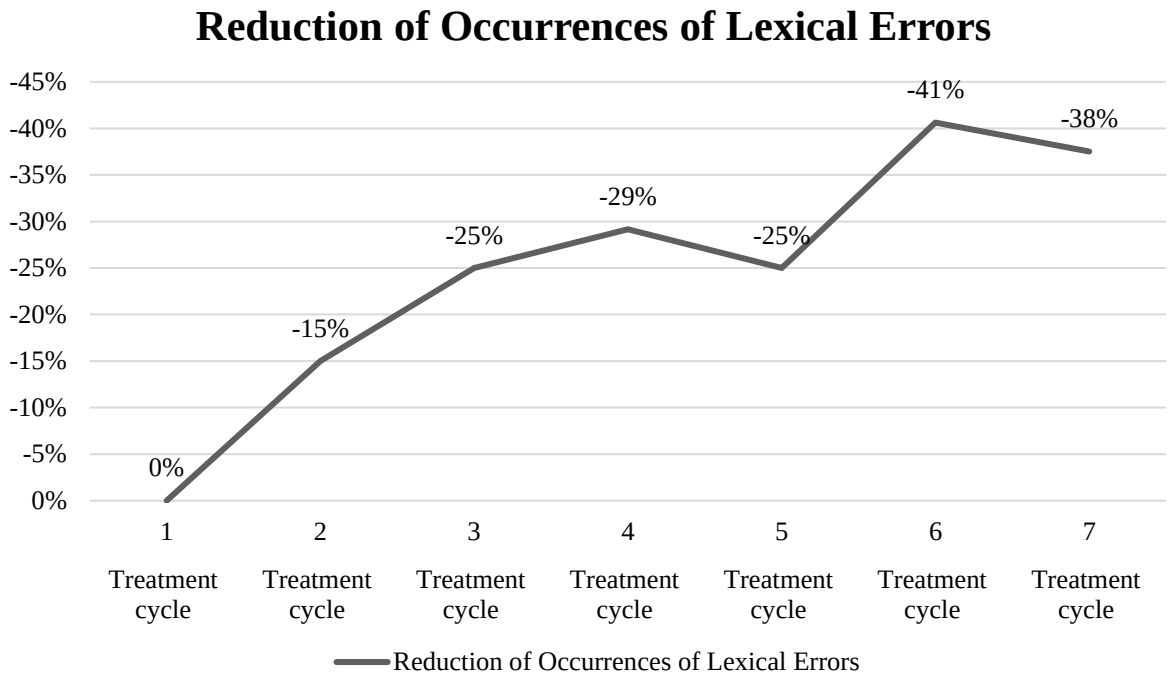
A better understanding of the presence of global lexical errors during treatment cycles is displayed in the graph below. It displays the average number of times this type of error occurred in the group before and after corrective feedback was provided.

Figure 7. Lexical Errors



According to the graph, there was an observed reduction of occurrences of lexical errors after correction at every cycle, except for cycle 1 where the average number remained the same. This finding, while preliminary, suggests that negative feedback did not have any impact on L2 speech development at first. However, further investigation is needed to understand why lexical global errors started to decrease at treatment cycle 2 and continued to reduce in the following cycles. The chart below demonstrates the reduction of occurrences in global lexical errors throughout the seven treatment cycles.

Figure 8. Reduction of Occurrences of Lexical Errors



This result may be explained by the fact that after treatment cycle 1, I began to accommodate negative feedback strategies to learners' developmental stage in lexical knowledge. I will clarify this.

Revisiting data immediately after treatment cycle 1, I noted that most of the lexical errors exhibited during communicative tasks had not appeared during instructional practice. In other words, participants seemed to know the target lexicon as they frequently used vocabulary correctly in oral drills, matchings, and word lists. However, participants unexpectedly confused terms and misused the same vocabulary while performing freer oral communication – especially in improvised audio or video recording. To illustrate this, I will describe P5's oral production in treatment cycle 1.

During instructional practice, I asked participants to send a picture of something they do every morning along with an audio caption. P5 sent the following picture.

Figure 9. P5 Picture

The picture was sent with the audio message “I have breakfast in the morning”. Later in the independent practice stage, I asked participants to list the things they do on a typical Sunday. Then, they had to exchange voice messages in their small group of three to find similarities and differences between Sunday routines. I witnessed the following conversation in P5’s group.

P7: “*P5”, I eat tapioca in the feirinha on Sundays. And you?*

P5: *Oh, I don’t take breakfast on Sundays. I sleep a lot!*

Due to the fact that P5 had said “have breakfast” correctly during instructional practice, it was my understanding that he knew the right vocabulary but had made a one-time mistake during independent practice. Therefore, I first chose to use repetition as a more implicit feedback strategy at remediation: I typed and held onto P5’s audio message and sent him a voice message with corrective feedback as demonstrated below.

Correction: *Take breakfast?*

P5: *Yes, teacher!*

Then, I realized that P5 had not noticed correction, so I provided further feedback, however, more explicit in the second time.

Correction: *Do you mean **have** breakfast?*

P5: *Yes, have breakfast.*

The second corrective strategy seemed to have been noticed by P5 who repeated the target form. After negative feedback was provided, I had participants repeat the previous task by comparing and contrasting their routine on a typical Monday. Below are two instances when P5's used the corrected target vocabulary.

P9: *I take a class…cedinho* (laughter). And you?

P5: *No! I have breakfast with family.*

P9: *Do you eat a lot?*

P5: *Yes!* (laughter)*, I take breakfast with coffee, bread,…bolo, tapioca…*

During this post-feedback task, P5 used the target vocabulary properly once and repeated the error shortly after. This helped me realize that the negative feedback I had provided had not generated P5's full awareness of the problem. When P5 replied "*Yes, have breakfast.*" to my repetition as feedback strategy, I mistakenly understood he had noticed the error. This was true with most participants as well – even worse with more limited proficiency learners.

Therefore, I decided to bring this to the focus group interview after treatment cycle 1. Here is what P5 said about the correction of "take breakfast".

Excerpt 9 (P5, group interview 1):

> *"Professor, na hora que o Sr. me mandou o áudio com a correção, eu estava entrando na rabeta. Aí como eu pensei que era só uma confirmação eu disse 'Yes, teacher'.*

This lack of noticing was reported by several other participants as well, except for P8 and P4, to whom recast seemed to have worked better as a more implicit strategy of negative feedback. This demonstrated that learners' developmental stage in the lexical knowledge varied. Learners like P8 and P4 were closer to the "automatization" stage (L. Vygotsky, 1978) than learners such as P5. To put it better, P5 was advanced enough only to use the target words in pre-communicative tasks – but not completely in authentic communication.

This makes a fertile territory for corrective feedback. The relation between interlanguage developmental stage and corrective feedback was hypothesized by Aljaafreh and Lantolf (1994) to which negative feedback should follow a "regulatory scale". Based on this hypothesis, I began regulating the degree of explicitness in negative feedback in an attempt to leverage correction to participants' developmental stage. Accordingly, lower proficient learners were provided with more explicit correction, such as metalinguistic feedback and elicitation. Back to excerpts 9 and 10, we have an illustration of this.

Excerpt 9 from treatment cycle 2

Utterance in independent practice:

P1: *I go sleep in **noon**.*

Negative feedback in remediation stage:

Correction: *You go sleep at **midnight**.*

P1: *Sorry, sorry, teacher…I go sleep…at…midnight.*

Excerpt 10 from treatment cycle 3 (metalinguistic feedback)

Utterance in independent practice:

P5: *My brothers **do** soccer in the night.*

Negative feedback in remediation stage:

Correction: *No, your brothers **play** soccer**.** Say that again.*

P1: *My brothers play soccer in the night.*

As mentioned previously, explicit-implicit is a continuum rather than a dichotomy (Nassaji & Swain, 2000). Therefore, the implicit-explicit regulation was made in reaction to learners' demonstrated uptake and noticing.

Results in figure 6 demonstrated that accommodating input-providing and output-promoting strategies to participants' zone of proximal development led to a positive impact of oral corrective feedback in MALL. This is demonstrated by the percentage of reduction in the amount of lexical global errors observed after correction at each treatment cycle. The last two cycles had the most improvement in which occurrences of this type of error decreased 41% and 38%, respectively.

In this subsection, it has been explained that oral negative feedback did not lead to the development of lexical knowledge in L2 speech until corrective strategies were accommodated to learners' zone of proximal development.

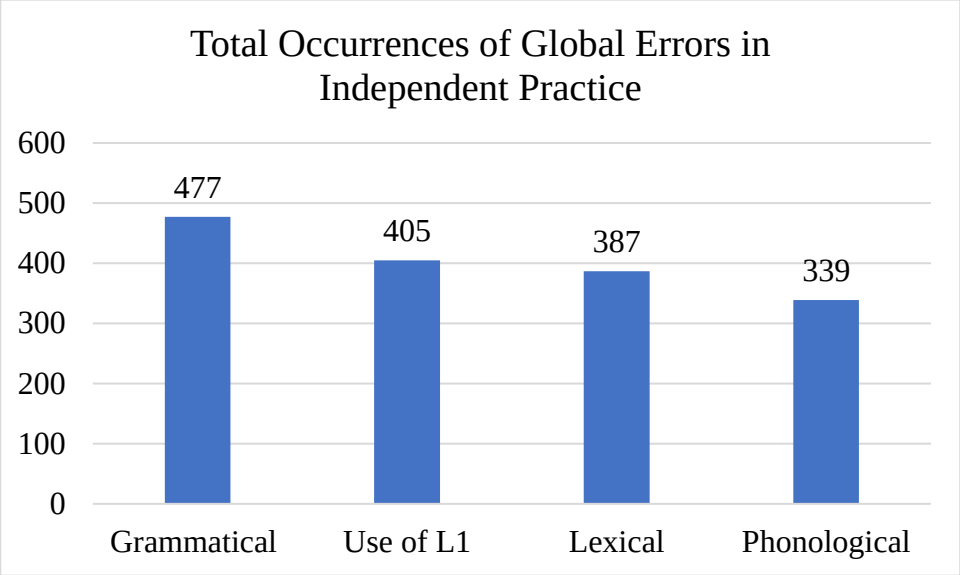
Moreover, selecting different linguistic structures makes it possible to examine how the same corrective strategies affect distinct linguistic attributes. Therefore, the next section will turn to the relation between negative feedback and grammatical errors.

Grammatical Errors

Treating grammatical errors was one of the major enterprises of this experiment. It was the most frequent type of global error detected during the pre-test which allowed me to establish the target grammatical forms to be practiced through WhatsApp. Interestingly enough, grammatical errors were also identified as the most recurrent type of error during independent

practice tasks. The graph below compares the grand total of grammatical errors and other error types.

Figure 10. Total Occurrences of Global Errors in Independence Practice



In order to illustrate what an occurrence of grammatical global error looks like, I transcribed below two excerpts.

Excerpts 11 and 12 from treatment cycles 2 and 3, respectively.

Utterance in independent practice:

P2: *It's* ***a quarter*** *thirty-one.*

P5: *Are you* ***doing*** *running today?*

Likewise lexical global errors, all grammatical errors were initially treated with recasts and more implicit output-promoting strategies. In other words, all nine participants received the same level of implicitness in negative feedback to treat grammar errors. The same excerpts from above demonstrate this.

Excerpt 13 from treatment cycle 2

Utterance in independent practice:

P2: *It's **a quarter** thirty-one.*

Negative feedback in remediation stage:

Correction*: It can't be a quarter thirty-one.*

P2*: Why?*

Excerpt 14 from treatment cycle 3

Utterance in independent practice:

P5: *Are you **doing** running today?*

Negative feedback in remediation stage:

Correction: *Are you **going** running today?*

P5: *No, teacher!*

Both excerpts demonstrate that participants did not notice correction whatsoever. In excerpt 13, P2 was clearly not ready to self-repair since he could not either notice the wrong form or remember the target one. In excerpt 14, P5 did not notice repetition as a corrective strategy since he simply answered my question instead of repeating the sentence with the target form. Accordingly, I assumed he was not able to self-repair either.

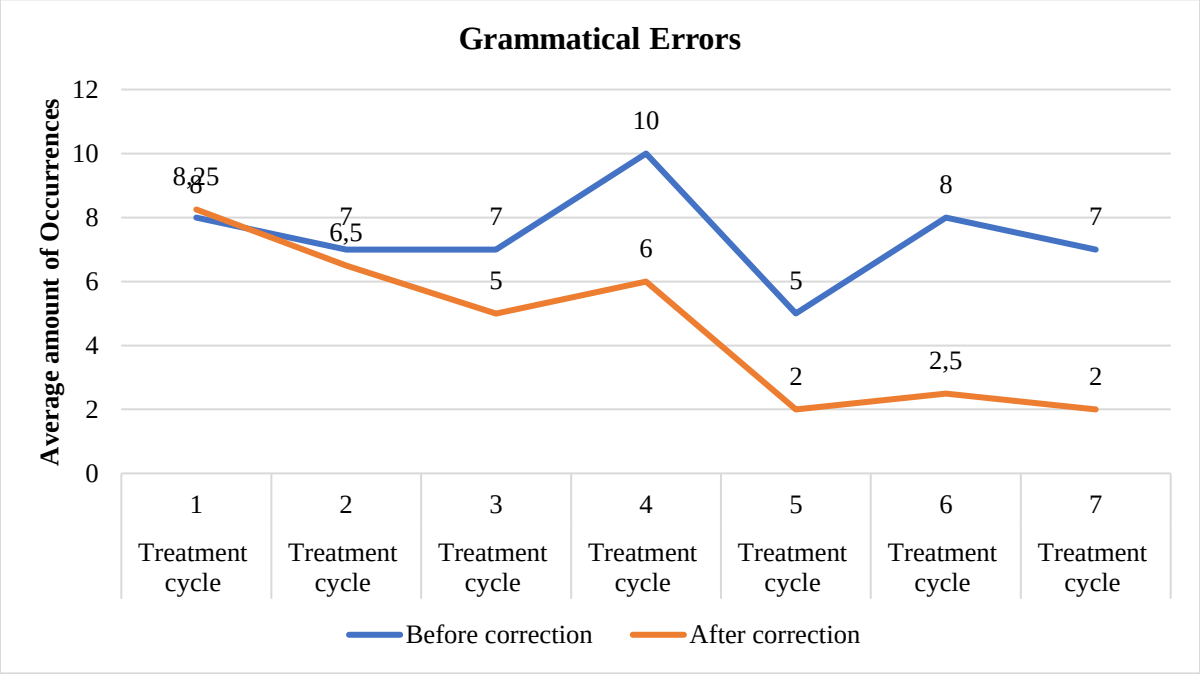
My attempt to initially provide more implicit output-promoting feedback to errors is supported by the current literature because this type of feedback is less intrusive and leaves room for learner to correct him/herself (Ellis, 2017a; Havranek, 2002; Hyland & Hyland, 2019; Li, 2010; Mackey, 2013; Naeimi et al., 2018; Yoshida, 2008). In other words, scholarship largely advises teachers to delay explicit input-providing feedback for situations where learners are incapable of self-repair. Nassaji and Kartchava (2018) go even beyond that. According to the authors, teacher correction should only happen – at all – if learners cannot either self-repair or

receive negative feedback from peers. It is beyond the scope of this study, though, to investigate the role of peer negative feedback.

Learners' overall failure to respond to this more implicit output-providing treatment in the first cycle was evidenced in both lexical and grammatical errors. As explained in the previous section, I brought this concern to the group interview that followed treatment cycle 1 and participants made it clear that they basically had not even noticed correction.

Therefore, as I became more sensitive to learners' individual zone of proximal development, the decision to dose explicitness in the correction of lexical errors was extended to grammatical errors. Consequently, results became progressively better as demonstrated in the graph below.

Figure 11. Grammatical Errors



The graph above demonstrates that the average number of grammatical global errors slightly increased after correction in treatment cycle 1. However, it decreased in all subsequent

cycles. The main reason for this improvement was the change in the negative feedback strategy applied during treatment as illustrated in the excerpts below.

Excerpt 15 from treatment cycle 5

Utterance in independent practice:

P8: ***Do*** *you* ***can*** *take a ferry to Salvaterra?*

Negative feedback in remediation stage:

Correction*: That's incorrect. Say "****Can*** *you* ***take****..."*

P8*: **Can** you take a **ferry** to Salvaterra?*

Excerpt 16 from treatment cycle 6

Utterance in independent practice:

P5: *We* ***didn't took*** *some pictures.*

Negative feedback in remediation stage:

Correction: *Past tense of take is incorrect. Say it again.*

P5: *We* ***didn't take*** *some pictures!*

Excerpt 17 from treatment cycle 5

P2: *Have shows on the weekends here.*

Teacher*: 'Have' is not correct. Use "There are".*

P2*: There…are….shows here.*

Excerpt 18 from treatment cycle 7

P3: *I am not drink milk everyday.*

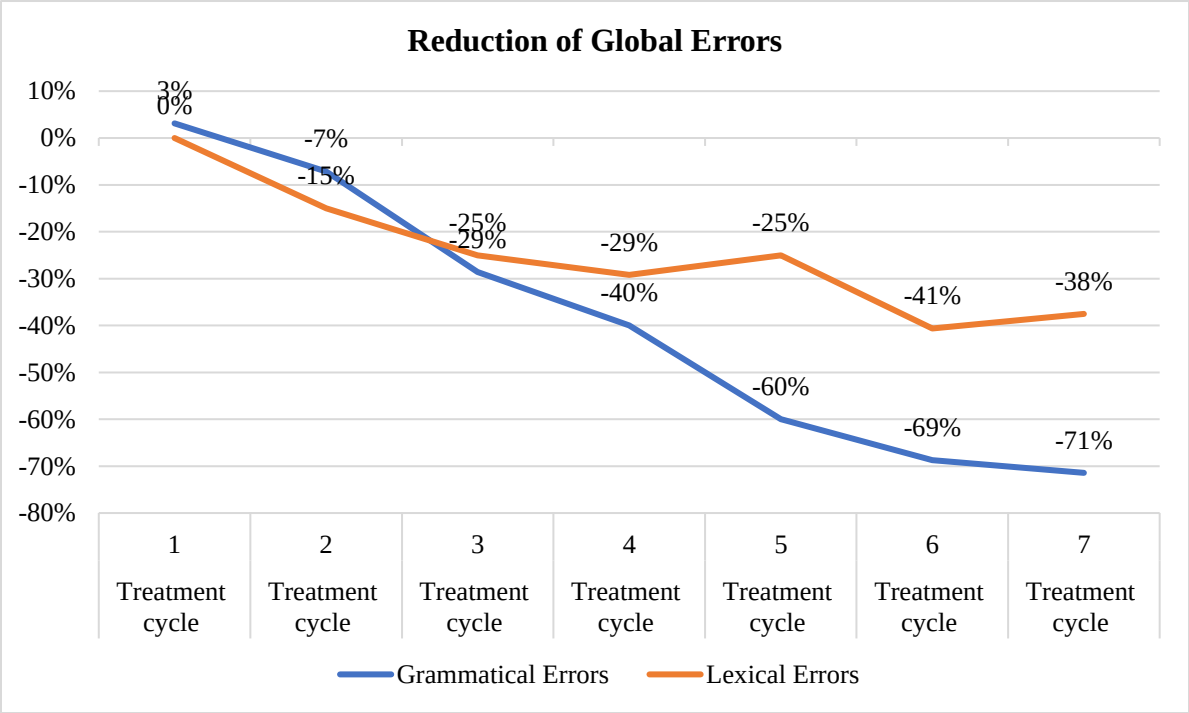
Teacher: *Use 'do' here, I do not drink milk everyday.*

P3: *Yes, teacher, I do not drink milk everyday.*

In the excerpts above, I used explicit correction either as indication of error or as metalinguistic feedback. They all resulted in learner uptake as the error was corrected in their response.

Figures 6 and 9 demonstrated that both grammatical and lexical errors decreased after learners received oral negative feedback. However, more can be seen if we compare the actual improvement in both types of error. Figure 10 serves this purpose.

Figure 12. Reduction of Global Errors



The graph above exhibits another unanticipated finding. Except for treatment cycle 3, grammatical forms exhibited significantly more improvement than lexical forms in all other treatment cycles. Especially in treatment cycles 5, 6, and 7, the reduction of global errors in grammar outperformed lexicon in an average of 32%.

As far as the type of feedback is concerned, both error types received more implicit output-promoting feedback in the first cycle and then gradually more explicit input-providing

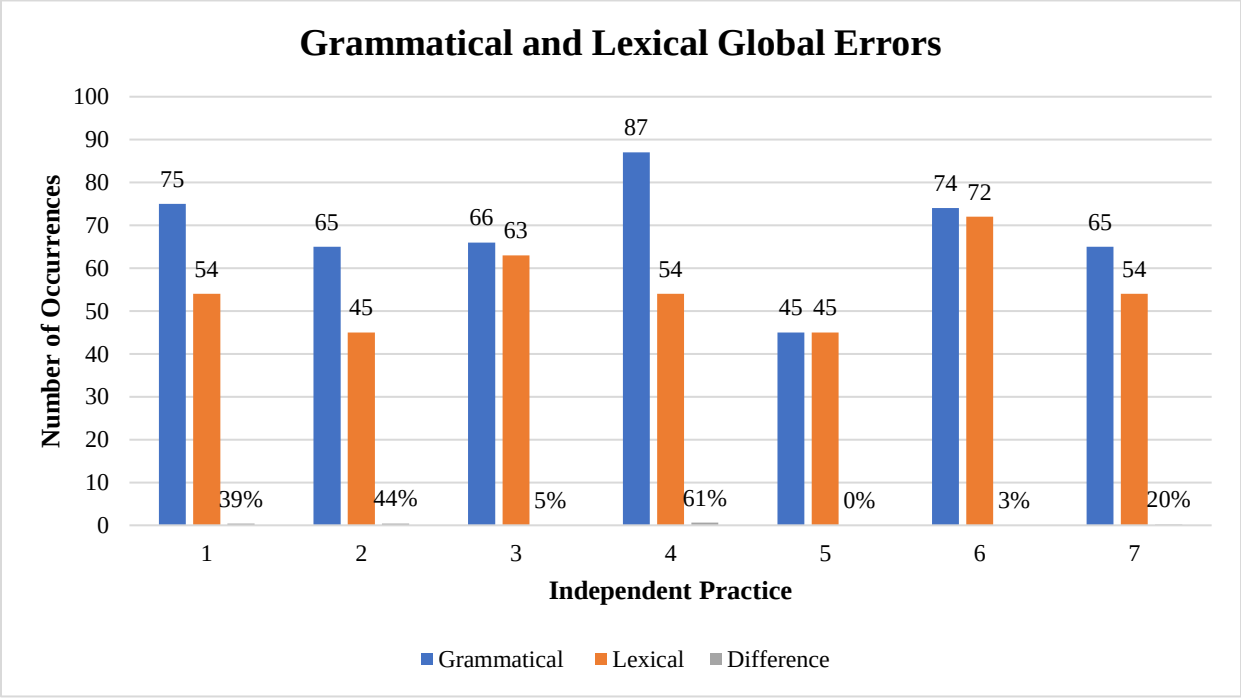
feedback in the following cycles – according to learners' observed zone of proximal development. Although oral negative feedback was similarly applied to both error types, grammatical errors presented reasonably more development in most treatment cycles.

There are several possible explanations for this result. The first hypothesis I found was that this discrepancy may be due to the higher number of global errors occurred in grammar as opposed to lexicon as previously shown in figure 10. As a consequence of this, the amount of oral negative feedback received in grammar was also higher to the amount received in lexicon. Therefore, learners would have had grammatical errors quite more remediated, leading to more improvement.

This conclusion does not find support in the current literature, though. Long's seminal work on focus on form, for instance, does not specify the ideal amount of feedback (M. Long, 1991, 1996) while in the meta-analysis published by Li (2010), longer treatments were found to be even less effective than those that lasted 50 minutes or less. On top of that, Havranek (2002) compared the efficacy of correcting the same linguistic error multiple times as opposed to correcting it just once. The author found no advantage in multiple correction. Accordingly, lexical errors would have had the same improvement as grammatical errors since both received sufficient feedback

Notwithstanding what is found in the literature, I decided to test my hypothesis. To that end, I needed to compare two variables: (a) the quantity of grammatical and lexical errors before correction at each treatment cycle and (b) the treatment cycles in which grammatical errors outperformed lexical errors after correction. The former is demonstrated below in figure 11 while the latter was already displayed in figure 10.

Figure 13. Grammatical and Lexical Global Errors



According to the graph above, the occurrences of grammatical errors occurred significantly higher than lexical global errors during independent practice in cycles 1, 2, 4, and barely 7. In contrast, figure 11 shows that the reduction of grammatical over lexical errors was higher in cycles 4 to 7. Therefore, this first hypothesis was proved wrong since there is no relation between the quantity of grammatical and global errors and the reduction of such types of error.

This brought me back to the start point and further investigation was needed. In order to find answers, I decided to have a closer look at field notes as well as group interviews and found evidence for two more hypothesis: (a) learners reported giving more importance to grammar than vocabulary and (b) mobile-assisted instruction was over-focused on grammar.

My second hypothesis was that learners dedicated more efforts to be accurate in grammar than in lexicon or even pronunciation. This conclusion emerged from focus group interviews as illustrated in the excerpts below.

Excerpt 19 (P1, group interview 1):

Eu já baixei uma gramática da internet pra estudar bacana nesse curso.

Excerpt 20 (P6, group interview 2):

Realmente nessa unidade eu quase não peguei no livro pra estudar. Por isso que errei a gramática.

Excerpt 21 (P3, group interview 3):

Todo mundo sabe que aqui em Soure ou é chuva ou é sol, então, o problema é dizer qual dos dois está acontecendo agora.

Excerpt 22 (P4, group interview 4):

Ah, professor, eu me preocupo mais com as regras mesmo porque se eu esquecer a palavra, eu mostro pela foto o que eu quero dizer.

Excerpt 23 (P2, group interview 5):

O Sr. corrigiu aquela palavra que eu errei, mas depois eu vi que eu tinha errado também o tempo do verbo e o Sr. nem falou nada. Acho que quando falamos o tempo do verbo errado confunde mais porque só a palavra errada dá pra entender pelos gestos, pela situação toda.

Excerpt 24 (P9, group interview 6):

Eu não acredito que eu errei a regrinha do passado. Foi o que eu mais estudei nessa unidade!

Excerpt 25 (P8, group interview 7):

> *Eu lembro de ter estudado a diferença entre 'how much' e 'how many' e nessa unidade eu consegui praticar bastante antes de gravar meu vídeo falando.*

In excerpt 19, P1 did not mention downloading a dictionary application. Her main concern was having support to master the grammatical forms in order to perform well. In excerpt 20, we P6 revealed that her textbook is primarily used to study grammar. In excerpts 21, 22, and 23, participants demonstrated a common belief that contextual cues may compensate for lexical errors over grammatical errors; therefore, they needed to make sure not to misuse grammatical forms. In excerpt 24, P9 exposed her preference for studying grammar in that unit. In excerpt 25, P8 focused on practicing the grammatical forms in preparation for the communicative task. Overall, these data support the hypothesis that learners' attitude towards grammar could be one reason why grammatical global errors reduced considerably more than lexical errors.

In order to examine this finding in the light of the current literature, I searched for studies that have explored Brazilian learners' beliefs about second language learning. In a recent study conducted, for instance, Madeira (2019) inquired about what beginners find to be facilitating factors in SLA. Results indicated that grammar was highly valued as long as it was used within a communicative context such as music or movies.

The valuation of contextualized grammar in Madeira's study shows a slight shift in learner beliefs about grammar. Nineteen years back, Carvalho (2000) also investigated Brazilian learners of English and suggested a strong common belief that grammar could be learned in Brazil while fluency could only be developed by living abroad. This had also been suggested by Barcelos (1995) who even hypothesized that this belief was a consequence of the way Portuguese was taught in Brazilian schools. Hence, the fact that participants in this study

consider grammar a central element to the SLA process is consistent with past and recent scholarship on learner beliefs.

Further investigation led me to a third hypothesis for the results in grammatical global errors. It seemed that the instructional methodology implemented throughout treatment cycles over-privileged grammatical forms. To test this hypothesis, I verified the quantity of tasks directed to grammatical, lexical, or phonological forms during instructional cycles.

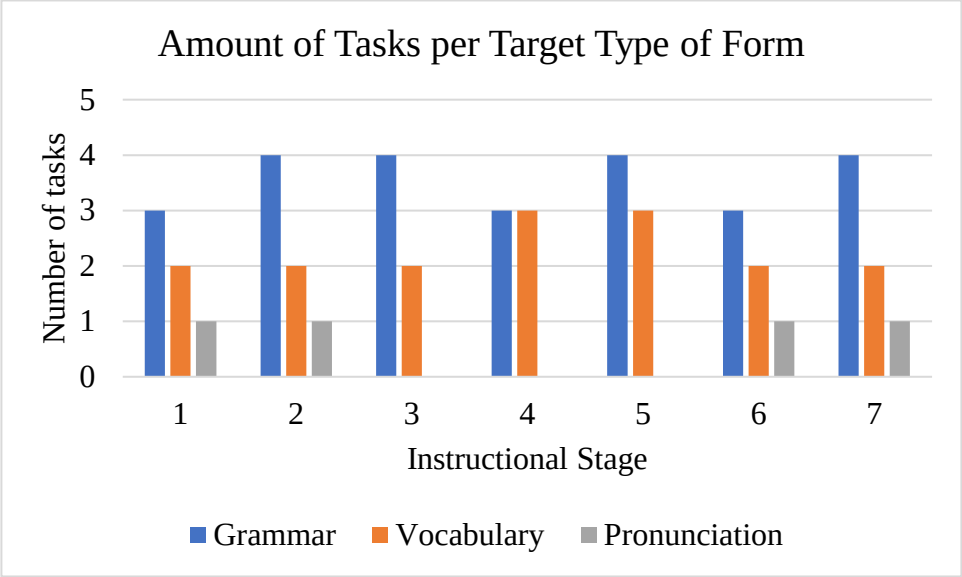
Prior to analyzing these numbers, I find it important to remind readers of how tasks were designed in the stages of each treatment cycle. The table below serves this purpose.

Table 18. Task Design in Treatment Cycles

Treament Cycle		
Stage		**Type of Task**
Preparation		No target language use
Instruction	Instructional presentation	Form-focused tasks
	Instructional practice	
Independent Practice		Meaning-focused tasks
Remediation	Correction	Negative feedback
	Post-feedback tasks	Meaning-focused tasks

Basically, only the tasks assigned during the instruction phase serve to evaluate whether I valued grammar over vocabulary and pronunciation. The reason for that is because the meaning-focused tasks integrated grammatical, lexical, and phonological forms in a communicative situation while negative feedback addressed the errors demonstrated during independent practice. Bearing this in mind, the graph below displays the number of tasks per type of targeted form.

Figure 14. Amount of Tasks per Target Type of Form



In this figure, we can see that the number of tasks that focused on grammatical forms was higher than vocabulary and pronunciation at all treatment cycles, except for cycle 4. It also shows how pronunciation was neglected and not focused at all in two of the seven cycles. Although most of these tasks were oral, I did not assign vocabulary or pronunciation-focused activities as much as grammar-focused, contributing to the decrease of grammatical global errors as opposed to other types of error.

This conclusion also finds support in Barcelos' hypothesis to which learners' beliefs about grammar can be influenced by the importance given to grammar in pedagogical decisions. More recently, Madeira (2008) also suggested this by explaining that learners' attitude towards grammar is a direct consequence of the instructional approach to which they are submitted – more so than the educational culture that permeates the learning context.

All these references to authors like Barcelos and Madeira have been previously presented in Chapter two as the micro and macro cognitive processes suggested by Gardner (1988) to

whom L2 speech production is a direct reaction to cultural beliefs, attitudes, motivation, situational anxiety, and prior achievements to proficiency in second language.

Thus, I understand that the third hypothesis about the development of grammatical knowledge in L2 speech here has been confirmed.

The conclusions about the three hypothesis that emerged in this subsection raise another question: how do these hypotheses relate to the role of negative feedback in the treatment of grammatical global errors in this study?

The first hypothesis was directly related to negative feedback since it suggested that the higher amount of oral feedback provided to grammatical errors would have caused learners to demonstrate more improvement in grammar than in lexicon.

The second and third hypotheses contribute indirectly to the success of oral negative feedback in the treatment of grammatical errors. In the second hypothesis, learners' belief about grammar was associated to their attitude towards learning the target grammatical forms. It is my understanding that the value assigned to grammar was true both before and after correction. Consequently, participants' attention to grammatical forms and therefore noticing and uptake after correction contributed to the significant reduction of grammatical global errors.

In the third hypothesis, the form-focused tasks were directly responsible for the advance of grammatical knowledge in L2 speech as they privileged grammar over other types of form. The relation between this hypothesis and oral negative feedback relies on the fact that learners were developmentally more ready to notice grammatical errors and consequently remediate them. This conclusion is supported by the Classroom Research literature which has vastly suggested that the more experience learners have in linguistic features the more attention they can dedicate to their form. This is explained by the fact that inexperienced learners are less

capable of attending to both form and meaning at the same time (Ammar & Spada, 2006; Doughty & Williams, 1998a; Mackey & Philp, 1998; Pienemann, 1998; Williams, 2013).

One more possible explanation can be drawn from instructed SLA research: the Transfer Appropriate Processing framework (Spada & Lightbown, 2008). The fact that grammar structures were used in similar conditions before and after correction, created a favorable ambience for cognitive comparison and, consequently, activation of working memory.

In sum, these results suggest that negative feedback contributed to the reduction of grammatical global errors and consequently the development of L2 speech. This positive impact resulted directly from corrective strategies that were sensitive to learners' ZPD and indirectly from learners' attitude towards grammar as well as their previous experience with the target linguistic features.

This part of the chapter focused on the role of negative feedback to the treatment of grammatical global errors. Having discussed how correction has resulted in the development of L2 grammatical knowledge in speech, the next section will now analyze how corrective feedback affected interlanguage phonology.

Phonological Errors

As mentioned in the literature review, phonological errors may occur on two levels: segmental and suprasegmental. The excerpts below illustrate errors that occurred on each of these levels.

Excerpt 26 from treatment cycle 7 (segmental phonological error)

Utterance in independent practice:

P1: *I don't like* ***cucumber****.*

The learner said [kukjuːmbə] instead of ˈ[kjuːkʌmbə]

Excerpt 27 from treatment cycle 5 (suprasegmental phonological error)

Utterance in independent practice:

P9: *Can I have **<u>chocolate</u>**?*

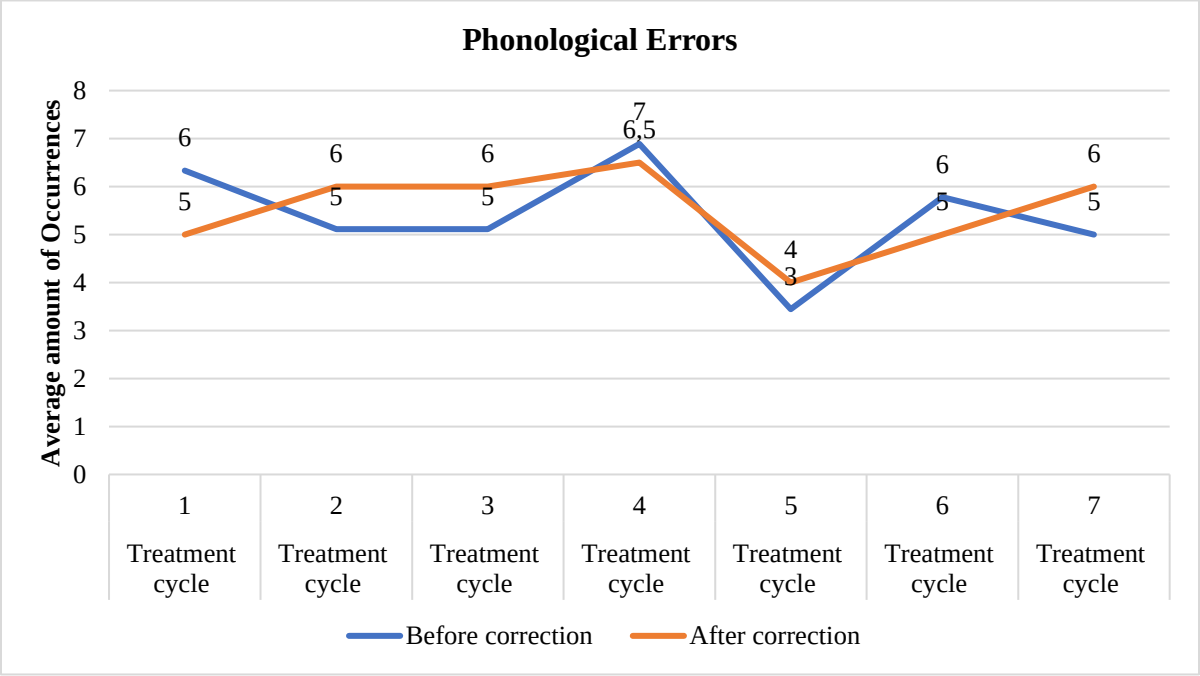
The learner said [tʃɒkəˈleɪt] instead of ˈ[ˈtʃɒklət]

In excerpt 26, the way P1 mispronounced the word ‘cucumber’ made it very unclear to understand what food she was referring to. In excerpt 27, P9 stressed the second syllable of ‘chocolate’ and pronounced the diphthong /eɪ/, instead of the schwa. Although I did understand what she meant, I believe it would be very challenging for a non-Brazilian speaker of English to understand.

I should begin by noting that finding global phonological errors was a challenge to me. The reason for that is because, although learners presented heavy Portuguese accent, their phonological mistakes did not seem to hinder communication as much as the other error types. This might be because participants and I share the same native language and their accent was familiar to me. Non-Portuguese speakers of English might have had more difficulty understanding participants which could have led to a higher count in phonological global errors. The total number of phonological global errors was 339 in independent practice throughout the seven treatment cycles: the lowest number if compared to the other three types of error.

Notwithstanding that fact, the main point here is to discuss how negative feedback affected phonological errors throughout the treatment cycles. To put it better, the number of phonological errors at each treatment cycle is what demonstrated whether there was progress or not. Contrary to expectations, this study did not find any progress in learners’ interlanguage phonology. This can be clearly visualized in the graph below.

Figure 15. Phonological Errors



The graph shows that participants maintained a similar amount of phonological global errors, even with individual negative feedback.

It is critical to stress that the type of negative feedback provided to phonological errors followed the exact same orientation used to treat the other types of error. As previously explained, I applied more implicit output-promoting feedback strategies in the first cycles. Then, I progressively applied more explicit input-providing feedback, especially to learners who needed further scaffolding. The excerpts below demonstrate how corrective feedback varied throughout the treatment cycles and was sensitive to participants' zone of proximal development.

Excerpt 28 from treatment cycle 1

Utterance in independent practice:

P1: *I like to study* ***<u>early</u>***.

The learner said [ˈi:hli] instead of ˈ[ˈɜ:li]

Negative feedback in remediation stage (elicitation)

Correction*: You like to study…*

P1*:* ***Early*** (learner repeats the error)

Excerpt 29 from treatment cycle 3 (recast)

Utterance in independent practice:

P9: *Who are you* ***with****?*

The learner said [wi:tʃ] instead of ˈ[wɪð]

Negative feedback in remediation stage

Correction: *Who are you* ***with****!* (teacher models the target pronunciation)

P9: *Who are you* ***with****!* (learner tries to repeat the target form)

Excerpt 30 from treatment cycle 4 (explicit correction)

P7: *You go shopping in the night?*

The learner used falling intonation instead of rising intonation. His interlocutor did not reply for thinking that was an affirmation instead of a question.

Correction*: It's a question. You should say "You go shopping at night?" (teacher models rising intonation).*

P7*: You go shopping at night?* (learner repeats rising intonation).

Excerpt 31 from treatment cycle 7 (metalinguistic feedback)

P5: *I never* ***cook***.

The learner said [ku:ki] instead of ˈ[kʊk]

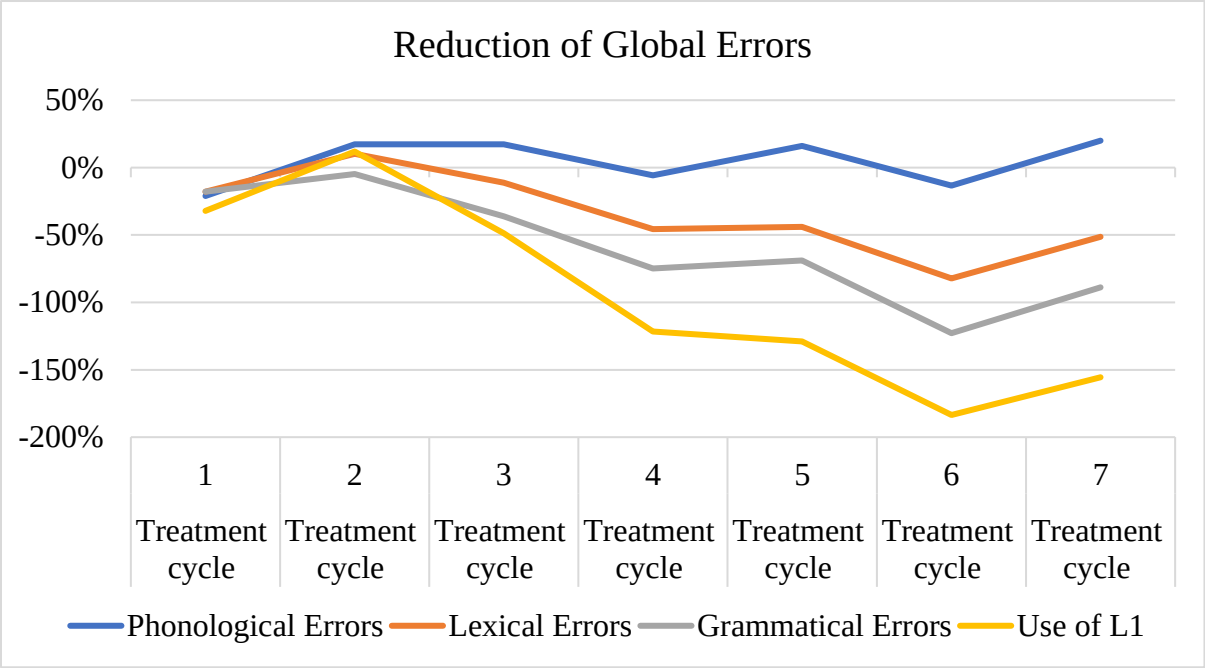
Correction: *You said "****cook****" wrong. Say "****cook****"* (teacher models target pronunciation)

P5: *I never* ***cook***. (learner tries to repeat target form).

The excerpts above are a small part of a longer interaction with participants about their errors. At each correction, I used more and more explicit and input-providing strategies until I realized they had noticed the error and had been provided a model of the target form should it be needed.

Now, if we compare the impact of such feedback to phonological errors in relation to the other error types, this is what we see.

Figure 16. Reduction of Global Errors



The graph demonstrates that the impact of negative feedback on phonological errors was hardly null as opposed to errors in grammar, lexicon, or use of L1. In some treatment cycles, there was even more phonological errors *after* correction than before.

A possible explanation for the unexpected effects of oral negative feedback here was the method used for treating phonological errors. Previous experimental studies on the treatment of errors in pronunciation have suggested that problematic sounds should first be practiced isolated, then on word or sentence level, before being used in communicative tasks (Ellis, 2017a; Li,

2010, 2013; Lyster & Saito, 2010; Mendez et al., 2010; Nassaji, 2018). This is confirmed by Keys (2001), who explained that learners tend to pronounce better in isolated words or sentences than in free speech. In the treatment cycles of this study, phonological errors were identified in free speech (during independent practice), negative feedback was provided to learners, and the tasks assigned in the remediation phase were also based on the freer use of language in a communicative situation. Therefore, participants did not have the opportunity to treat problematic sounds in progressive levels of pronunciation.

The lack of opportunity for extensive practice of pronunciation extrapolated the remediation phase. Throughout all stages of the treatment cycles, pronunciation practice was not enough to develop participants' ability to utter specific sounds. As mentioned earlier, oral tasks were directed to mastering grammatical forms primarily and lexicon secondarily – especially because those forms had been planned from the start. The treatment of segmental and suprasegmental sounds had not been planned and the learning of sounds was rather incidental throughout the study. To put it better, grammatical and lexical errors were treated with a combination of specific FonF activities *and* corrective feedback while phonological errors were barely treated through corrective feedback.

Due to the unique processes that phonological errors are subject to (e.g. negative transfer, reactivation of L1 acquisition, physiological limitations, psychological and social factors), there should have been a specific stage in each treatment cycle dedicated to the development of problematic segmental or suprasegmental pronunciation. However, I considered that pronunciation could be developed incidentally while learners performed oral tasks in general.

Researchers such as Li (2010) and Lyster and Saito (2010) have also advised that the effects of negative feedback in pronunciation may be constrained by individual learner

differences. Accordingly, aside from the methodological flaws in this study, the data generated here have also indicated that two individual learner differences have negatively affected participants' progress in pronunciation – even following different oral feedback strategies: (a) negative emotions and (b) physiological constraints. The excerpts below serve to illustrate this.

Excerpt 32 (P1, group interview 3)

> *Professor, eu toquei seu áudio várias vezes, mas não adianta, eu não sei falar assim. Minha língua não vai!*

Excerpt 33 (P9, group interview 4)

> *Desculpa eu ter sumido depois daquela correção lá da pronúncia do "bathroom", é que eu me sinto meio estranho quando tenho que falar essa palavra. Além de não conseguir, parece que todo mundo ri quando eu falo ela (risos)! Não dá pra falar outra coisa no lugar?*

Excerpt 34 (P7, group interview 5)

> *Olha, até que eu consigo consertar a frase e tal, mas quando o problema é falar assim alguns sons...eu posso treinar o dia todo que sai tudo errado. Mas o Sr. consegue me entender, né?*

Excerpt 35 (P2, group interview 2)

> *Eu não suporto ouvir minha voz em inglês. Parece até outra língua! Pra mim vai todo mundo achar horrível.*

Excerpt 36 (P4, group interview 7)

> *Aquele video que o Sr. mandou com a boca falando bem devagar aquelas palavras me fez perceber que eu tô malzão mesmo pra*

pronunciar algumas coisas. A minha boca não consegue fazer igual de jeito nenhum!

As far as negative emotions are concerned, participants reported feelings of frustration, embarrassment, fear, anxiety, and stress directed more specifically to pronunciation. The frustration for not being capable of pronouncing the target sounds generated lots of stress to participants, especially after correction.

In excerpt 33, for example, P9 did not reply to my correction until two days later because he felt frustrated for mispronouncing the word "bathroom". In order to cope with her limitation, the participant wanted to avoid the word in future utterances. This case reveals a vastly reported drawback in studies about oral negative feedback. Post-activities or tests may not detect interlanguage gaps because learners may be adept at avoiding forms they struggle pronouncing (Li, 2013; Lyster & Saito, 2010).

In excerpt 34, P7 gave up on fixing his pronunciation problems and hoped that he could be understood by the teacher and – I should say – other more proficient speakers. In excerpt 35, P2 did not refer to his incapability of pronouncing any specific sound or word, but he did not like his voice when speaking English. Thus, he felt embarrassed about the sounds he produced altogether – regardless of the presence of errors. All other excerpts aforementioned reflect recurrent negative feelings because of pronunciation problems.

The reason why this finding should be discussed here is because cognition and emotions are inseparable in L2 speech (Swain, 2013). And this cognition-emotion combination is one of the keystones of Vygotsky's sociocultural theory which I chose to be one important perspective of this study. In terms of L2 speech production, scholarship has largely suggested the presence of negative emotions and their impact to learning (Aragão, 2017; Baran-Łucarz, 2016; J. Flege,

2002; Swain, 2013). Therefore, what participants reported here is somewhat expected, especially in relation to pronunciation.

If on one hand negative feelings have been suggested in previous studies on L2 speech, on the other hand recent research has reported that learners feel less anxious or fearful when L2 oral production happens through MALL or computer-mediated communication. An example of this is found in Aragão, Paiva, and Gomes Junior (2017) who addressed the relation between emotions and L2 speech production, particularly with the use of digital technologies. The authors conducted a qualitative study at Federal University of Minas Gerais, Brazil, where a group of college-level ELLs reported their experiences in L2 oral speech by means of digital technologies. Based on the assumption that negative emotions tend to interfere in the process of L2 speech production, the authors aimed to investigate whether the use of technology could lower these emotions and support learning. Findings demonstrated that participants reported feelings of confidence and pleasure while using digital resources to speak in the target language. The study concluded that the use of technology did motivate L2 interaction whereas learners felt more willing to communicate.

Considering both hands of previous literature, I hypothesize that the presence of negative feelings about pronunciation here would have been even more accentuated had interaction been face-to-face. Nevertheless, it is beyond the scope of this dissertation to examine this in depth.

A second individual limitation that might have affected the development of pronunciation after correction here is physiological. In excerpts 32, 33, 34, and 35, for example, participants made direct reference to their incapability to produce the target sounds – despite knowing them. Even when learners were aware of the sounds they should make, it seemed that their limitation was not cognitive, but physiological. One example of this is P9 who would always say

[ˈbeːtruːm] instead of ˈ[bɑːθruːm] which sometimes would make “bathroom” sounded like “bedroom”, hindering communication.

The close interaction between cognition and physiology has been vastly investigated in the literature (J. Flege, 2002; R. R. Lee, McCune, & Patton, 1970; Lund, 2003; Sapon, 1952; Shehzad, Alghorbany, Lashari, Lashari, & Razzaq, 2019). A major consensus among authors is that L2 pronunciation demands a complex reorganization of articulatory processes. Lund (2003) explained that second language learners have conditioned their nerves and muscles to articulate their native sound system, therefore, pronouncing L2 sounds requires their fine motor system to respond well to brain stimuli. This is a lengthy life-long process to many L2 adult learners.

Considering that the participants of this study are low intermediate and relatively new to the process of SLA, physiological constraints played a heavy role in their capacity to overcome phonological global errors. Hence, the amount of corrective feedback provided and opportunities for extensive practice of isolated sounds were insufficient to treat pronunciation problems caused by participants’ inexperience in producing the English language sound system.

In short, oral corrective feedback did not seem to affect phonological errors in this study for three possible reasons. First, the amount and extent of error treatment was insufficient for participants to advance interlanguage phonology. Second, learners demonstrated negative emotions towards pronunciation, despite the mobile learning environment. Third, the presence of physiological constraints significantly interfered in oral performance.

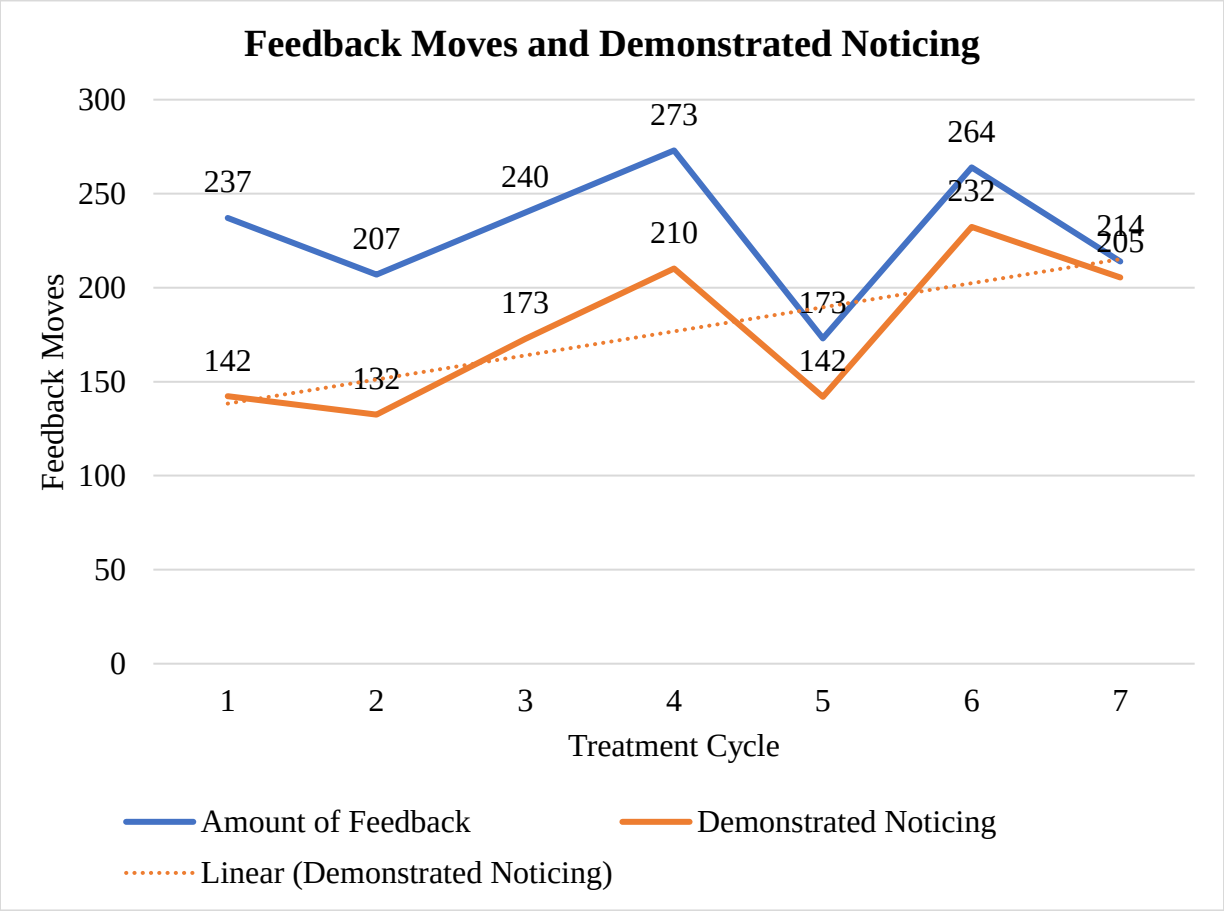
So far, this section has analyzed the role of negative feedback by discussing data that were particular to each error type. What follows is a more detailed discussion of how noticing, uptake, and learning were observed in the mobile learning environment used in this study.

Noticing

As previously explained, oral negative feedback was given during a 4-day remediation stage in every treatment cycle. On days 1 and 2, participants would receive feedback and were expected to demonstrate noticing to all global errors detected in the independent practice stage. This noticing was demonstrated in the form of a reply in which participants would record (sometimes write) back to me with the corrected target language or with some sign of understanding as exemplified in the previous subsections. Bearing this in mind, this subsection will discuss to what extent noticing was demonstrated and how these results relate to the new concept of time and place that permeated this seamless learning environment, especially considering the WhatsApp features available.

To begin with, figure 8, displayed in the grammatical errors section, indicated the total amount of global errors detected per error type during all seven treatment cycles: 477 grammatical errors, 405 uses of L1, 387 lexical errors, and 339 phonological errors. That means errors were brought to participant's attention 1.608 times throughout 8 months of instructional intervention. This raises the first question: was noticing demonstrated in every one of those 1.608 times? The short answer is a resounding 'no'. A more detailed answer begins by comparing the amount of oral feedback moves and the number of times participants demonstrated noticing. The figure below serves this purpose.

Figure 17. Feedback Moves and Demonstrated Noticing



According to the graph, the distance between feedback moves and demonstrated noticing was much bigger in the first cycles, then, it became smaller in cycle 4 and towards cycle 7. The dotted line exhibits the increase in demonstrated noticing throughout the treatment cycles. Pos hoc analysis might refer this result directly to the change in feedback strategy explained in the previous sections – which might be true. However, after revisiting my field notes, I noted that in the first treatment cycles, participants would immediately respond to my oral feedback which reflects what happens in the traditional face-to-face setting. In the aftercoming treatment cycles, they started to take longer to record their reply: a few hours, an entire day or even two good days. This led me to further analyze participants' comments in group interviews and the excerpts below illustrate what I found.

Excerpt 37 (P2, group interview 4)

Teacher, antes de responder, eu tive que voltar lá pra atividade pra lembrar o que a gente estava falando. Daí como o Sr. corrigiu aquela frase, eu ainda fui ver no livro o que tava errado na frase. Mas, como eu só chegava em casa de noite, demorou pra eu poder parar e fazer tudo isso pra lhe responder.

Excerpt 38 (P3, group interview 5)

Como o Sr. mandou a correção de manhã cedo, eu tive que esperar meu irmão acordar pra poder tocar o seu áudio pra ele ouvir e poder me ajudar a consertar.

Excerpt 39 (P1, group interview 6)

Professor, eu ouvi os seus áudios com as correções, mas eu tava no ônibus, indo pro porto do Camará. Depois eu fiquei sem internet e esqueci de responder. Mas, no outro dia eu mandei a resposta, isso que importa. (risos).

Excerpt 40 (P7, group interview 7)

Antes de lhe responder, eu fui ver os áudios enviados pelas pessoas do meu grupo pra como os outros tinham falado.

Excerpt 41 (P9, group interview 5)

Não sei se os colegas já tiveram esse problema, mas às vezes o seu áudio fica muito baixinho e eu não escuto direito. Ou

tem muito ruído por trás. Até agora foi só o que me atrapalhou um pouco pra enviar a resposta pro Sr.

The excerpts above illustrate significant data about learner noticing. In excerpt 37, P2 searched for the target form in the textbook in order to understand his error before replying to my oral feedback. In excerpt 38, P3 made use of peer-scaffolding to notice the error and prepare to respond to feedback. In excerpt 40, P7 compared his utterance to his peers', hoping to find the difference and learn the target form. In all these three excerpts, learners indicated that teacher correction alone was not enough for noticing. Therefore, despite my efforts to accommodate oral feedback strategies to participants' zone of proximal development, they often needed some type of additional scaffolding from materials or from peers before they could notice the error and prepare to reproduce the target form.

This finding has important implications to what we know about oral negative feedback in SLA. First, it shows that autonomous behavior towards noticing the error might emerge as consequence of the seamless learning environment that is inherent to mobile asynchronous communication. To explain better, oral correction was provided in the form of audio message which allowed participants to have access to it whenever and wherever they pleased. Consequently, participants took advantage of this by making time to find support at home from materials or peers in order to fully understand their error. Additionally, the fact that WhatsApp allows users to replay their audio messages as many times as desired enabled participants to access utterances that had been made in previous activities for comparison.

Literature has suggested that negative feedback benefits more advanced learners because they are more developmentally ready for noticing the mismatch between their utterance and the target language form (Ellis, 2017a, 2017b; Nassaji, 2018; Nassaji & Kartchava, 2018).

Considering that learners in this study are low proficient, a second possible implication of this result is that mobile negative feedback may benefit all proficiency levels – even beginners – as it allows for extra time and scaffolding for error noticing.

A third implication of this finding is that oral negative feedback through mobile asynchronous communication does not interrupt learner oral production. In the classroom, explicit oral correction is seen as disruptive, exposing, and sometimes harmful to L2 speech development although it has been widely proved efficient for language acquisition (Al-Hoorie, 2017; X. Chen et al., 2018; Ellis, 2017a, 2017b; Naeimi et al., 2018; Nassaji, 2018).

The fact that asynchronous communication may facilitate autonomous behavior and allows time for self-study has been a long-time suggestion in the CALL and MALL literature. Warschauer (1995), for example, claimed that asynchronous communication might allow more complex language production while Duarte (2011) sustained reflection as one of the advantages of this type of communication. On a more psychological note, Aragão, Paiva, and Gomes Jr (2017) pointed out that asynchronous communication through WhatsApp could be beneficial to learner emotions towards L2 speech production, for instance.

In the Negative Feedback field, studies have found evidence that error noticing happened more frequently in computer-mediated communication than in face-to-face interaction (Blake, 2000; Payne & Whitney, 2002; Shekary & Tahririan, 2006; Sotillo, 2000). Nevertheless, the unconstrained nature of time and place of MALL in noticing the error is not yet clear. No research has been found that surveyed what or how learners' cognitive processes are triggered by ubiquitous oral negative feedback. From the results of this study, I assume that mobile asynchronous communication may affect error noticing by:

(a) enabling recursive exposure to teacher feedback by replay application features.

(b) allowing access to feedback in non-educational contexts.

(c) allowing time for peer or material scaffolding.

(d) facilitating focus on form to low proficiency learners.

(e) not interrupting learner oral production.

(f) not exposing learners to peers during correction.

Notwithstanding the significance of such implications, the excerpts above indicate that asynchronous mobile communication may also lead to disadvantages in oral negative feedback. In excerpt 39, for instance, P1 had access to correction at a time when she could not give it proper attention. This caused her to almost forget about it and never reply back. From this, it is my understanding that asynchronous mobile communication might jeopardize oral corrective feedback if the learner is not enough motivated and committed to his or her own learning.

Another possible disadvantage of mobile communication to error noticing is actually inherent to the use of any technology: technical impairments. In excerpt 39, P1 also reported problems connecting to the internet while P9, in excerpt 41, reported difficulty hearing my oral negative feedback due to excessive noise. These difficulties might or might not affect the process of negative feedback, though. The seamless nature of mobile communication makes it possible for both learners and teacher to wait until technical issues are resolved before they may continue interacting from anywhere.

Several questions remain unanswered at present regarding how noticing is affected by the mobile learning environment, especially in MALL for communication, with features of instant message applications such as WhatsApp. However, scholarship has also suggested that noticing and learning are not isomorphic. In other words, the effectiveness of corrective feedback is not measured by noticing alone (Lightbown, Spada, Ranta, & Rand, 1999; McDonough &

Mackey, 2006). Learners have to respond to oral negative feedback by demonstrating the corrected use of the target form; and this is what follows in the next subsection.

Uptake

Participants' replies to correction have been previously used to measure noticing. These replies reflect learner uptake and are expected to be successful for correction to be considered effective. In other words, participants were expected to repair their oral production after correction within the mobile learning environment. Learners' uptake was then considered unsuccessful when they demonstrated noticing the correction by replying to it without reaching the target language form. From this standpoint, I have coded participants' uptake following the taxonomy suggested by Lyster and Ranta (1997) to which uptake is either (a) utterances still in need of repair or (b) utterances with repair. To explain this better and display my data, the samples below illustrate these two types of uptake.

Excerpt 42 from treatment cycle 7 (utterance with repair)

P5: *How **much time** do you eat eggs a week?* (grammatical error)

Correction: *Say "**how many times**"* (explicit correction)

P5: *How many times do you eat eggs a week?*

Excerpt 43 from treatment cycle 6 (utterance with repair)

P4: *We play**ed** at home.* (phonological error)

The learner said [pleɪɛd] instead of ˈ[pleɪd]

Correction: *You said "**played**" wrong. It's not* [pleɪɛd]. It's [pleɪd]. *Say "We **played** at home"* (explicit correction – I modelled the target pronunciation)

P4: *We **played** at home*. (learner tries to repeat target form).

Excerpt 44 from treatment cycle 5 (utterance with repair)

P8: *I think he speaks france.* (lexical error)

Correction: *No, no. He speaks…* (elicitation)

P8: ***French***!

Correction: *Ok. Repeat: 'I think he speaks French'.*

P8: *I think he speaks French.*

Excerpt 45 from treatment cycle 4 (utterance with repair)

P1: *How much is…a pulseira?…esqueci.* (use of L1)

Correction: '*How much is* ***the bracelet****?' Repeat. (recast)*

P1: *How much is* ***the bracelet****?*

Excerpt 46 from treatment cycle 3 (utterance still in need of repair)

P9: *Are you* ***study*** *a lot?* (grammatical error)

Correction: *Are you* ***STUDY*** *a lot?* (repetition)

P9: *Sorry, teacher. Do you study a lot today?*

Excerpt 47 from treatment cycle 2 (utterance still in need of repair)

P7: *It's* ***noon****.* (phonological error)

The learner said [nʌn] instead of ˈ[nuːn]

Correction: *It's…?* (recast)

P7: *It's* ***noon, twelve o'clock****.* (learner repeats the phonological error).

Excerpt 48 from treatment cycle 1 (utterance still in need of repair)

P6: *I have breakfast* ***before*** *I get up.* (lexical error)

Correction: *I don't understand it. Repeat please.* (clarification request)

P6: *I have breakfast at 7:00 and I get up at 6:00.*

Excerpt 49 from treatment cycle 7 (utterance still in need of repair)

P3: *No, I hate…Fernando vê aí....?* (use of L1)

Correction: *Sorry, I don't understand. Repeat please.* (clarification request)

P3: *I hate* ***alho***.

In the excerpts above, participants replied to correction and demonstrated some effort to resolve the communication breakdown that occurred during independent practice. In excerpts 42 to 45, participants successfully reformulated their utterance. In excerpts 46 to 49, contrastively, participants provided modified output; however, through partial repair or occurrences of either the same error or a different error.

For the purpose of analysis, I first used Lyster and Ranta's (1997) taxonomy to categorize and classify participants' uptake. Next, I retrieved two previous results: the quantity of corrective feedback and of demonstrated noticing at each treatment cycle. These figures are displayed below.

Table 19. Corrective Feedback and Demonstrated Noticing

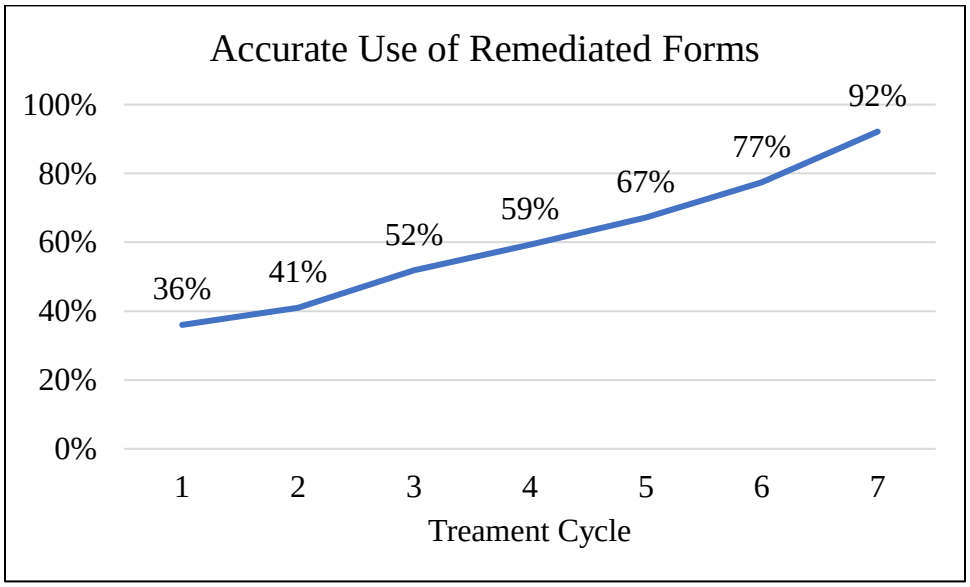
Treatment Cycle	Number of Occurrences			
	Corrective Feedback	**Demonstrated Noticing**	**Utterances with Repair**	**Utterances still in need of repair**
1	237	142	85	57
2	207	132	85	48
3	240	173	124	48
4	273	210	162	48
5	173	142	116	26
6	264	232	204	28
7	214	205	197	8
Total	***1.608***	***1.236***	***973***	***263***
Average	***230***	***177***	***139***	***38***

What this table shows is that – for instance – there were 237 erroneous forms that received correction in treatment cycle 1. Participants, then, were expected to realize the mismatch between their oral production and the target form 237 times, but they only

demonstrated noticing 142 times. After noticing, participants replied to correction with successful repair only 85 times and they replied with utterances that still needed further repair 57 times. The final product of this first cycle is considered the amount of successful uptake, in other words, the 85 times utterances were repaired in this first cycle. However, participants were expected to self-repair the 237 times which is the total amount of correction received.

The method of learner language analysis used here was taken from Ellis and Barkhuizen (2005) in order to generate the rate of accurate use of remediated forms. If I compare the final product and the expected results of treatment cycle 1, I conclude that only 36% of corrections led to self-repair. Following this line of reasoning, the graph below demonstrates the results of all treatment cycles.

Figure 18. Accurate Use of Remediated Forms

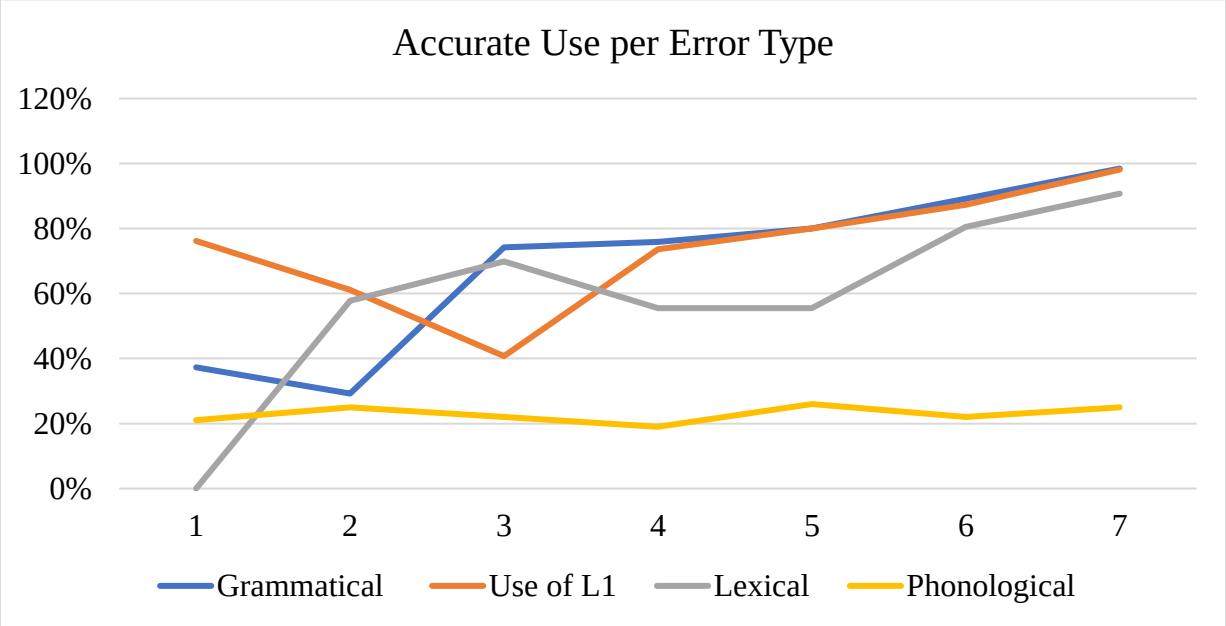


The graph above displays to what extent learners not only noticed the error, but also repaired their utterance with the target language form. What is interesting about this data is that learner uptake increased steadily and significantly at each treatment cycle. Before analyzing this more in-depth, I should note that successful learner uptake does not necessarily mean learning or

L2 speech development. It only means that learners noticed and corrected the error right after feedback was provided. Measures of learning were provided in the previous sections, where I discussed the amount of global errors before and after the remediation stage.

On the question of how negative feedback related to modified output in this study, I should first note that the increase in accurate use (demonstrated above) partially corroborates the data discussed previously in this chapter. In prior subsections, I discussed the reduction of global errors by error type. In sum, there was observed reduction in the occurrences of errors by the use of L1, as well as grammatical and lexical errors. Phonological errors, in contrast, did not demonstrate significant decrease. The graph below displays the distribution of accurate use per error type.

Figure 19. Accurate Use per Error Type



According to figure 17, there was significant increase in accurate use in all error types, except for phonological errors. This finding support the results described in previous sections where I explained that phonological errors did not demonstrate as much improvement as the other error types.

Overall, the rate of successful uptake was inversely proportional to the reduction of global errors which makes complete sense. The more accurately participants used oral language after correction, the less global errors they would make in aftercoming communicative tasks. The inverse proportion found between the increase in successful uptake and the decrease in global errors made after correction was an expected outcome. Considering that successful uptake is also a result of error noticing, the conclusions previously discussed for explaining both the reduction of global errors and the increase in error noticing may apply to explain the advance of accurate use. Nevertheless, a more in-depth investigation on learner uptake might lead to additional factors that explain why participants progressively reached self-repair after feedback.

One additional factor might be the negotiation of form. Participants' initial failure to reply correctly compelled me to continue providing negative feedback on the same error. This can be better understood by observing the following excerpt.

Excerpt 50 from treatment cycle 3 (utterance still in need of repair)

P2: I am play cards with my friends. (grammatical error)

Correction: '*I **AM** play cards with my friends'?* (repetition)

P2: *Yes, teacher?*

Correction: *You don't need **AM** here. Repeat your sentence without **AM**. (metalinguistic feedback)*

P2: *I don't need 'am'. I play cards with my friends.*

The sample above demonstrates that the first feedback type used to correct the error (repetition) was not effective. After realizing the inefficacy of such strategy, I decided to combine input-providing and output-promoting feedback which created an environment that encouraged the learner to attend to linguistic form and to revise her input. This positive result

may be explained by the interactionist SLA theory to which input and interaction allow leaners to compensate conversational flaws and fulfill interlanguage holes (Swain, 1993, 1998, 2005, 2008).

From the interactionist perspective, the negotiation of form was only possible in this study due to the asynchronous nature of the mobile environment where negative feedback was held. Two reasons underpin this conclusion. Firstly, participants were beginning learners of English which might have limited their formulating of questions or signalizing of need for help in face-to-face settings. Secondly, asynchronous communications allowed for individual corrective feedback. This opened a window of opportunity for every learner and every global error. This contrasts with other settings, such as the traditional classroom, for example, where corrective feedback is seldom individualized due to constraints of time, face exposure, and negative feelings that might arise. Hence, mobile communication made it possible for participants to reflect, process, negotiate the form, and – consequently – revise their own input as a response to correction.

The increase in successful uptake may also be explained here by the Noticing Hypothesis (Schmidt, 1995) to which intake for learning is a result of noticing. As previously explained, this hypothesis is only possible when interaction occurs under key conditions (Cross, 2002). The table below summarizes the conditions and displays how they have been met in this study through WhatsApp.

Table 20. Conditions of the Noticing Hypothesis

Conditions for Intake	**Oral Negative Feedback Provided through WhatsApp**

Input needs to be comprehensible	Negative feedback was input-providing when necessary. And WhatsApp allowed participants to replay input recursively wherever and whenever they wished.
Learners must notice their error	Learners were provided time for reflecting and finding further scaffolding of content in order to
Interaction must facilitate input noticing and output comprehension	notice input and reformulate their output
Noticing is most likely to happen through negotiation of form	Asynchronous communication through WhatsApp made negotiation of form possible with individual learners

As a result of this analysis, I argue that the conditions for both noticing and repair in this study were enhanced by WhatsApp features and the asynchronous nature of communication during oral negative feedback. These findings have important implications for the development of mobile-assisted language learning applications that use artificial intelligence to correct oral production.

To begin with, there should be a combination of both input-providing and output-promoting feedback strategies to create an environment for the negotiation of form. In addition, learners may benefit from ubiquitous and recurrent access to feedback if it stays available for replay. Finally, asynchronous communication allows for autonomous input scaffolding and reformulation of oral production.

So far, this discussion has attempted to explain the increase of utterances with repair in this study by resourcing to interactionist SLA and the Noticing Hypothesis. However, these results may also serve to expand the current understanding of 'timing' in oral negative feedback.

As explained in Chapter 2, Negative Feedback scholarship has regularly explained that oral corrective feedback must occur immediately after learners' inaccurate utterance due to the 60-second "cognitive window of opportunity" contended by Doughty (2001). Researchers have suggested that this window is a required condition for successful learner uptake because it allows for immediate cognitive comparison (noticing) and skill-acquisition induced through prompting. For that reason, Nassaji (2018) explained that immediate corrective feedback has been the default choice in studies and that there are no theoretical explanations about how delayed correction could facilitate L2 speech development.

Being that said, another implication of the results here is that oral correction through mobile asynchronous communication might expand the notion of "window of opportunity". During the remedial stage of treatment cycles, oral negative feedback was provided at least one day after participants had performed the communicative task. This was possible because the context of language production and interactional turns could be revisited by both teacher and learners through WhatsApp several hours or even days later, maintaining active mental representations in learners' working memory. If, on one hand, the context and learner linguistic production remained accessible long past 60 seconds, on the other hand, participants also had access to input that could provide them with accurate models of the target form. As previously explained, such input was provided either in correction itself or by the materials and peers that learners autonomously approached. Hence, the WhatsApp features in this study seemed to have

allowed cognitive comparison between learners' erroneous utterance and the target form, causing restructuring of their linguistic knowledge.

I should also clarify that, to my understanding, the results in this study do not make a case for delayed negative feedback such as the plethora of research that has been made in computer-mediated communication (Kim, 2014; Ziegler & Mackey, 2017). Here, I advocate that oral correction through WhatsApp is considered a form of immediate feedback since it preserves cognitive comparison and the prompting of utterances with repair.

In fact, the findings here may also be used to expand another theoretical framework in instructed SLA frequently used to explain successful uptake: the reconsolidation theory (Hupbach et al., 2013; J. L. Lee et al., 2017; Nader & Einarsson, 2010). Previously, I have argued that participants in this study could revisit their erroneous utterance multiple times and long after the moment of production by using WhatsApp features. This allowed for a long-term mental representation of their error, causing it to become liable to change. Based on the reconsolidation theory, I understand that the seamless and ubiquitous access to both erroneous utterance and negative feedback enhanced the process of mixing the two mental representations, facilitating the alteration effect that leads to learning. The moment of correction, therefore, became more than a particular point in the past. It became a point in the present every time learners accessed it. All in all, I understand that oral corrective through WhatsApp may enhance the cognitive process explained by the reconsolidation theory.

This subsection has analyzed the relationship between oral negative feedback and uptake in the present study. It is now necessary to discuss whether (or how) learning occurred as a consequence of progressively increase in noticing and repair throughout the treatment cycles.

Posterior Test Results

As explained in Chapter 3, the posterior test administration replicated the procedures followed during the pretest in order to assure consistency and internal validity. Therefore, the posttest was administered twice: the first one by me and the second one, a week after, by a peer teacher who agreed to collaborate. At both occasions, a guest interactant participated in the second part of the test to insure real-life conversation. The time span between pre and posttest was about 10 months and the ultimate purpose of the posttest was to verify participants' L2 oral performance after the implementation of the instructional methodology presented here.

To begin with, the table below compares participants' average scores using the oral assessment rubric designed (appendix G).

Table 21. Pre and Post-Test Oral Assessment Rubric

	Average Score	
Segmental Pronunciation	**Pre-Test**	**Post-Test**
Vowel production was intelligible, and mistakes did not hinder communication.	4	5
Segmental consonants and consonant clusters were intelligible, and mistakes did not hinder communication.	6	6
Supra-segmental Pronunciation		
Intonation was meaningful and accurate.	7	7
Word and sentence stress contributed to convey the message.	5	6
Rhythm was well-paced and speech was smooth.	5	5
Communicative Competence		
Speaker demonstrated knowledge of syntax rules, vocabulary words, and morphological constituents.	4	6
Speaker demonstrated the capacity to comply with social rules and contextual demands to use grammatical forms.	5	7
Speaker demonstrated the capacity to comply with rules of politeness.	7	7
Speaker demonstrated coping strategies which compensate for linguistic and social constraints and keeps communication going.	6	7

As can be seen from the table above, there was barely no improvement in segmental and supra-segmental pronunciation after the implementation of the instructional cycles. A few vowel and consonant sounds improved as well as word and sentence stress – notably in longer sentences. Some improvement may be observed in all areas of participants' communicative competence, especially in the knowledge of linguistic constituents and the capacity to meet social demands in the use of such forms.

The tables below will bring those overall results in more details and demonstrate participants performance by the average number of global errors detected.

Table 22. Pre and Post-Test Read Aloud Section

READ ALOUD Phonological Errors		
Section	**Average**	
	Pre-Test	**Post-Test**
Word list	8	7
Sentence list	10	8

Table 23. Pre and Post-Test Social Interaction Section

SOCIAL INTERACTION								
Unit	**Phonological**		**Grammatical**		**Lexical**		**Use of L1**	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
4	8	7	11	7	9	6	11	9
6	9	8	12	7	10	7	8	6
7	11	8	15	9	11	8	15	12
8	9	9	10	6	13	9	15	13
9	8	8	14	8	12	8	13	10
10	8	7	14	9	8	6	11	9
12	8	7	10	6	11	8	10	8
Average	***9***	***8***	***12***	***7***	***11***	***7***	***12***	***10***

In table 22, where results of the Read Aloud section are shown, little improvement can be seen in participants' pronunciation. In the Social Interaction section, detailed in table 23, the same pattern is observed with hardly any improvement in the participants' scores. This cannot be said about results in grammatical and lexical errors or the use of L1. There was a 42% improvement in the use of grammar, 36% in the use of lexicon, and 17% in the non-use of L1.

As mentioned previously, post-test results are consistent with those observed during the treatment cycles. Participants did not demonstrate significant change in segmental or supra-segmental pronunciation but did exhibit improvement in their knowledge and use of linguistic constituents in L2 oral performance.

This combination of findings provides support for the conceptual premise that oral corrective feedback through mobile communication leads to lasting improvement in L2 oral skills. To explain better, participants improvement in the use of grammar and vocabulary during treatment cycles was not constrained to their cognitive reaction to corrective events. Successful uptake and utterances with repair led to better performance in the post-test as well.

These results provide also provide further support for the hypothesis that the asynchronous nature of negative feedback through WhatsApp respect the "window of opportunity", suggested by Doughty (2001), which allows learners to recover the context where the error was made and restructure their linguistic knowledge.

Final Remarks

This investigation has discussed the potential of oral negative feedback in the development of L2 oral skills through WhatsApp. For that purpose, this chapter was organized in three major sections (pre-test results, treatment cycles, and post-test results) and the measures used were learning, noticing, and uptake.

In order to examine learning, I analyzed occurrences of global error per type before and after correction at every treatment cycle. It was critical to observe which corrective strategies supported the reduction of which type of error.

Noticing was investigated in the ways participants replied to oral negative feedback and important considerations were made regarding the new sense of time and place brought by the mobile learning environment.

Next, uptake was described as either successful or not. This measurement was based on the accurate use of language demonstrated by participants after remediation. Findings in uptake also led to intriguing implications to the Classroom Research field.

Finally, the post-test results were reported by comparing participants' scores in the oral assessment rubric. In order to discuss the overall (in)effectiveness of oral negative feedback here, I also compared results between pre and post-tests based on the error types detected in both occasions.

The next chapter will present a summary of the findings and implications of this study as well suggestions for future work.

CHAPTER 5

CONCLUSION

This chapter serves two purposes. The first one is to revisit the general and specific objectives set out here and discuss whether they have been met or not, highlighting the significance of findings and limitations of this study. The second one is to offer suggestions of future directions and recommendations for further inquiry in the field.

General and Specific Objectives

We already know that Negative Feedback is highly relevant for instructional contexts. Teachers can incorporate it into their more communicative activities. The knowledge gap is in whether Negative Feedback has the same results in mobile assisted language learning, especially in the development of L2 oral communication.

In this investigation, the aim was to assess whether oral negative feedback facilitates or not L2 speech development by means of MALL for communication through WhatsApp. In the previous chapter the results described support the idea that oral corrective feedback may facilitate L2 speech development in MALL for communication. Learners' L2 oral improvement was observed more notably in the use of structural constituents such as words and grammatical forms than in the utterance of segmental and supra-segmental pronunciation.

Considering that studies in oral corrective feedback usually last a few weeks or months – if much – this study may be considered a longer-term application of oral corrective feedback in the uncharted territory of mobile-assisted language learning. Therefore, the general conclusion stated above may be better understood by breaking it down in the specific objectives established for this investigation.

Specific objective A

The first specific objective was to investigate noticeability of oral negative feedback through WhatsApp features. Results indicated that learners' noticing of errors increased throughout treatment cycles. As explained previously, this increase is mostly attributed to the transition from more implicit to more explicit feedback strategies and the accommodation of correction to learners' zone of proximal development.

As far as WhatsApp features are concerned, noticeability was enhanced by the asynchronous nature of teacher-learner interaction. To explain this better, oral feedback was available through voice messages sent by the teacher. Participants had full and recursive access to correction whenever and wherever they wanted which characterizes the seamless learning made possible in MALL for communication. As a consequence, they could play my voice-message multiple times in non-educational contexts – such as while commuting or performing household activities – allowing time for peer and material scaffolding before formulating a reply to me. Another observed impact of MALL in oral corrective feedback here was that learners did not have their oral production interrupted neither were they exposed to peers during correction as opposed to what would have happened in the traditional classroom. This was true because oral negative feedback was sent privately to participants' conversation inbox – one feature offered by the WhatsApp application. In sum, WhatsApp contributed to learners' noticing of errors and potentialized their awareness of the error.

An implication of this to the field of Applied Linguistics is that noticing in oral corrective feedback may be enhanced by MALL for communication features which increases the chances of successful uptake. This research extends our knowledge on how mobile

communication may affect instructed SLA by demonstrating how instant messaging applications such as WhatsApp may create a more favorable environment for oral correction.

Specific objective B

However, noticing alone is insufficient for learning. Participants response to noticed errors is an integral evidence of second language acquisition. Therefore, another specific objective here was to find the relationship between oral negative feedback and modified output (uptake) in the mobile learning environment.

Findings suggested that learners' rate of accurate use of remediated forms increased from 36% to 92% throughout instructional cycles. This means that increase in noticing was directly proportionate to the increase in quality modified output (successful uptake). This reveals an additional contribution of MALL to corrective feedback: asynchronous communication facilitated negotiation of form.

The new sense of time and place presented by mobile learning allowed participants to formulate questions and signalize any need for help which supported more quality correction. This seamless learning feature also opened an individual window of opportunity for every learner and for every global error detected. This is an advantage of mobile learning if we compare it to the face-to-face setting where instruction is bounded in time, not allowing for this level of in-reach.

The increase in participants' accurate use of remediated language is therefore a consequence of the conditions for intake allowed by WhatsApp. Learners' ubiquitous access to correction supported reflection, further scaffolding, and the negotiation of form which are defended by Schmidt (1995) as critical for noticing and successful uptake.

Specific objective C

While summarizing conclusions in the previous specific objectives, I already mentioned how the understanding of the new sense of time and place in mobile communication may affect oral negative feedback.

Nonetheless, I should further note that the empirical findings of this study provide a new understanding of a key concept in oral negative feedback: 'timing' of correction. Scholarship has advocated that computer-mediated feedback differs from classroom feedback in terms of when correction is provided. In the traditional classroom, feedback is considered more effective because it happens during language production and within a "window of opportunity". In contrast, computer-mediated communication would provide "delayed feedback" which is claimed to be decontextualized and far out of the so-called window.

It is my conclusion here that the seamless learning allowed by WhatsApp features maintains the context where the error was made and allows learners to open the "window of opportunity" by accessing (at any time) both their language production and teachers' correction. Accordingly, timing of oral negative feedback by means of MALL for communication should be considered "immediate" and not "delayed". Therefore, mobile-based correction affords a juxtaposition of the wrong utterance, the communicative context where it was made, and the negative feedback provided. This furnishes leaners with all the elements present in immediate feedback and adds to a growing body of literature on both MALL and oral correction.

Another important relation can be drawn between oral corrective feedback and MALL. The asynchronous nature of mobile communication as well as the WhatsApp features have provided an environment of extra support with extended time and scaffolding as explained before. This extra support provided by the environment enabled oral corrective feedback to be

investigated in lower proficiency language learners. The idea that studies in oral corrective feedback are more successful with higher proficiency learners is a result of the constraints imposed by the face-to-face environment. Therefore, this study has gone some way towards enhancing our understanding of oral negative feedback in lower proficiency learners.

Specific objective D

Another specific objective in this study was to determine what types of oral negative feedback appear to be more successful in MALL. The relevance of WhatsApp features is clearly supported by the findings described previously. However, I did not find a direct correlation here between such features and the effectiveness of any specific types of oral negative feedback.

Although it is true that input-providing feedback strategies were more effective than output-promoting ones, my understanding is that this was more directly related to how correction was accommodated to learners' zone of proximal development than to the elements of mobile communication itself or the WhatsApp features.

The generalizability of this may be questionable, though. A limitation of this study relies on the fact that oral feedback strategies were used through a single messaging application. Other applications with different features might support specific corrective strategies, leading to a solid correlation between MALL and feedback types.

Specific objective E

Furthermore, this study aimed to determine what types of error better responded to oral negative feedback through WhatsApp. Findings described in the previous chapter demonstrated that the impact of negative feedback on phonological errors was hardly null as opposed to errors in grammar, lexicon, or use of L1. In some treatment cycles, there was even more phonological

errors *after* correction than before. Post-test results corroborated this finding and confirmed that little or no improvement was observed in interlanguage phonology.

Although this may be considered a longer-term study in the field, phonological errors still did not respond well to oral corrective feedback through WhatsApp. I do not assume that this was a result of fossilization of phonological errors because learners are beginners and have not reached a plateau in their L2 phonological development. My conclusion here is that oral corrective feedback did not seem to affect phonological errors in this study for three possible reasons. First, the amount and extent of error treatment was insufficient for participants to advance interlanguage phonology. Second, learners demonstrated negative emotions towards pronunciation, despite the mobile learning environment. Third, the presence of physiological constraints significantly interfered in oral performance.

In addition to the reasons outlined above are the limitations of this study regarding phonological interlanguage. The fact that only global errors were remediated led to the first reason described above: insufficient treatment on segmental pronunciation. Had this study focused on minimal pairs or the realization of specific sound patterns, results in interlanguage phonology might have been different.

In contrast, grammatical and lexical domains exhibited significant improvement in L2 speech throughout the instructional cycles. Both instruction and learners seemed to have valued the use of syntactic and lexical forms more than phonological which is a possible reason for such result. Other reasons have been discussed previously.

Regardless of the cause, though, these findings taken together shed some light on what we know about oral negative feedback. They are evidence that lower proficiency learners may enhance their L2 oral communicative competence by receiving oral correction in asynchronous

communication. This improvement was more visible in this study in the target forms that this course design privileged and in the types of error selected for investigation.

The decrease in grammatical and lexical global errors demonstrated that oral correction through MALL may lead to L2 speech development on the discourse level even in lower proficiency learners. Here are three important contributions to the field: (a) the fact that oral correction may be efficient through MALL, (b) the fact that such improvement may reach even lower proficiency learners, and (c) the fact that oral negative feedback contributed to L2 speech development on the discourse level.

I have discussed the first two contributions previously. In regard to the third contribution, listed as (c), scholarship in oral negative feedback has focused on the treatment of pre-determined linguistic forms with little attention to how those forms interfere in communication. In this study, I focused on the treatment of global errors through MALL which brings an important contribution to the field in terms of discourse-level remediation by means of distance education.

Specific objective F

The last specific objective set out here was to determine whether oral corrective feedback through mobile communication leads to lasting improvement in L2 oral skills. The instruments I used to verify this was the pre and the post-tests. Findings were consistent with those found throughout the treatment cycles as explained previously. In other words, L2 speech acquisitional process exhibited steady progress and improvement in the same areas was detected at the end of 8 months of oral production.

Considering the this was a much longer-term inquiry if compared to previous research, it is my understanding that oral negative feedback through MALL might lead to lasting

improvement. I should refrain this conclusion to the knowledge of the linguistic constituents verified in this study (syntax and morphology) which excludes isolated patterns of pronunciation.

In general, therefore, it seems that the seamless and ubiquitous nature of MALL may create an optimum environment for continued L2 oral acquisition as a result of oral negative feedback. I shall now turn to the limitations of this study.

Limitations of the Study and Future Directions

Finally, a number of important limitations need to be considered. First, examining the impact of oral correction to L2 speech development is rather difficult. An array of different variables interplays in the oral acquisitional process such as developmental readiness, language aptitude, personality factors, motivation, degree of autonomy, among other learner and contextual elements. Here, I solely focused on the impact of oral negative feedback through WhatsApp by verifying pre and post remediation performance. Investigating the facilitative impact of other learner and contextual factors may be addressed in future research.

Additionally, all negative feedback provided in this study was through voice messages. The MALL environment chosen here allowed other ways by which I could have explored correction. For instance, negative feedback could have been provided with video-messages, GIFs, pictures or memes that indicated the error and addressed leaners' attention to the target form. This variety of media may have produced a whole different learning experience to participants and provided a richer set of data upon the relation between oral negative feedback and MALL for communication. Hence, exploring multimedia oral negative feedback in instant messaging applications creates a fertile area of research that has not been comprehensively inquired.

Moreover, the scope of this study was limited in terms of whose feedback was investigated. I focused on teacher feedback, ignoring the potential of peer-feedback that did happen throughout the study. The decision to focus on teacher feedback was based on the communication channel selected to the study. Correction was provided in a two-way conversation box with each participant. I decided to provide feedback individually in order to avoid having other participants 'kick in' to help and end up not allowing the target learner to respond to correction, especially in implicit feedback strategies such as 'recast'. In addition, big-screen exposition of corrective feedback might have caused negative feelings in some participants.

Although no teacher correction was given in the groups where more than one participant produced oral language and interacted with others, I could observe interesting events of peer-feedback and negotiation of form that emerged while they were interacting. Those could have be addressed in the discussion of findings. Since peer-correction was not part of the investigation, those events were left uncharted. In future research, it would be interesting to assess the effects of oral peer-correction in the development of L2 oral skills through MALL. Or else, the comparison of noticing and uptake between peer and teacher oral negative feedback.

Another important limitation of here was the lack of a control group. In the discussion of results, I often compared data from this group to hypothetical face-to-face environments such as the traditional classroom. The implementation of the same data elicitation methods and treatment cycles to both a mobile online and a face-to-face group could have provided more concrete grounds for comparison. However, this limitation has not refrained results of this investigation from presenting intriguing questions in need of further inquiry. For instance, do

low proficiency L2 learners benefit from mobile more than face-to-face oral correction? Or are global errors better treated through MALL than in the traditional classroom?

One more limitation can be found in the amount of feedback provided in remediation. All global errors received oral negative feedback, however, in face of unnoticing, I could have provided extended feedback to the same error. This would have been possible if I had added one or two extra days to the remediation stage. Extended feedback could have allowed further negotiation of form and participants may have responded with more successful uptake since the first treatment cycle, even when feedback strategies were less effective. In other words, multiple feedback types to the same erroneous form might have resulted in more L2 speech development. Of course, this is just a speculation of possible different results. Investigation in the amount of feedback that is to be provided holds several unclear questions and this makes room for further research in the relation between oral correction and MALL.

Final Considerations

This study has argued that oral negative feedback through WhatsApp may bring positive impact to L2 speech development. Among the insights gained from this investigation are: (a) the role and importance of correction to the acquisition of L2 oral skills; (b) the potential of MALL for communication for immediate feedback in asynchronous communication; (c) new insights and opportunities for teacher-learner feedback through seamless learning; (d) the potential of multimedia oral negative feedback; (e) the need for extended time and accommodations of corrective strategies to learners' developmental stage; (f) insights into differences and similarities between mobile online feedback and face-to-face correction; (g) the view of feedback as a complex phenomenon.

A growing body of literature has attempted to address those themes. Yet, oral negative feedback remains a very under-explored area of research and more descriptive and interventional research is needed to understand the role of correction to the development of L2 speech.

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APPENDICES

Appendix A

FORMULÁRIO DE INFORMAÇÕES INICIAIS PARA PESQUISA EM ENSINO-APRENDIZAGEM DE LÍNGUA INGLESA COM TECNOLOGIA MÓVEL

Dados Pessoais

Seus dados pessoais serão mantidos em sigilo durante toda a pesquisa e discussão dos dados na elaboração do texto da tese.

1. Nome

2. Gênero

- Masculino
- Feminino

3. Local de residência

- Centro de Soure
- Comunidade do Céu
- Comunidade do Caju-Una
- Comunidade de Pedral
- Salvaterra
- Santa Cruz do Arari
- Cachoeira do Arari

Infra-estrutura

1. Você possui um smarphone?

- ◯ Sim
- ◯ Não

2. Com que frequência você acessa a internet via pacote de dados?

- ◯ Diariamente
- ◯ Algumas vezes na semana
- ◯ Uma vez por semana
- ◯ Nunca

3. Com que frequência você acessa a internet via Wi-fi no seu celular?

- ◯ Diariamente
- ◯ Algumas vezes na semana
- ◯ Uma vez por semana
- ◯ Nunca

Comunicação via telefone celular

4. Com que frequência você utiliza seu celular?

- ◯ Diariamente
- ◯ Algumas vezes por semana
- ◯ Uma vez por semana
- ◯ Raramente

5. Com que frequência você faz ligações de voz via celular?

- ◯ Diariamente
- ◯ Algumas vezes por semana
- ◯ Uma vez por semana
- ◯ Raramente

6. Assinale com que frequência você realiza as atividades listadas abaixo.

	Diariamente	Algumas vezes por semana	Uma vez por semana	Raramente	
Envia ou recebe mensagens de texto sem internet (SMS)	◯	◯	◯	◯	◯
Envia ou recebe mensagens de texto via Whatsapp	◯	◯	◯	◯	◯
Envia ou recebe mensagens de texto via outro aplicativo com internet	◯	◯	◯	◯	◯

Comentários

7. Com que frequência você realiza as atividades abaixo através do Whatsapp?

	Diariamente	Algumas vezes por semana	Uma vez por semana	Raramente	Nunca
Envia e recebe mensagens de texto	○	○	○	○	○
Envia mensagens de voz	○	○	○	○	○
Recebe (e ouve) mensagens de voz	○	○	○	○	○
Envia imagens ou vídeos produzidos pela câmera de seu próprio celular	○	○	○	○	○
Recebe imagens ou vídeos produzidos pela câmera de celular dos seus interlocutores	○	○	○	○	○
Envia ou recebe (e assiste) vídeos produzidos profissionalmente ou por desconhecidos	○	○	○	○	○
Envia ou recebe (e lê) arquivos em PDF, TXT ou PPT	○	○	○	○	○
Envia ou recebe (e visita) links para sites e/ou arquivos online	○	○	○	○	○
Envia ou recebe (e ouve) arquivos em áudio	○	○	○	○	○

Comentários

8. Com que frequência você realiza as atividades abaixo em redes sociais ATRAVÉS DO CELULAR?

	Diariamente	Algumas vezes por semana	Uma vez por semana	Raramente	Nunca
Acessa redes sociais através do celular	○	○	○	○	○
Interage via mensagens de texto em redes sociais	○	○	○	○	○
Assiste vídeos com áudio em redes sociais produzidos pela câmera de celular dos seus interlocutores	○	○	○	○	○
Publica vídeos com áudio em redes sociais produzidos pela câmera de seu próprio celular	○	○	○	○	○
Publica vídeos com áudio em redes sociais produzidos profissionalmente ou por desconhecidos	○	○	○	○	○
Abre links de áudio ou música em redes sociais	○	○	○	○	○

Comentários

Produção Oral em Língua Inglesa

9. Com que frequência você utiliza inglês oralmente fora da sala de aula?

- ○ Diariamente
- ○ Pelo menos uma vez por semana
- ○ Pelo menos uma vez por mês
- ○ Nunca

Comentários

10. Quando você utiliza inglês oralmente fora de sala de aula, que tipo de atividades realiza?

- ☐ Conversas de cunho social com amigos
- ☐ Leio um texto em voz alta
- ☐ Canto uma música
- ☐ Pratico os diálogos do material de sala de aula
- ☐ Falo comigo mesmo em voz alta (sem interação)
- ☐ Outro (especifique)

11. Você usa algum recurso tecnológico para praticar conversação ou pronúncia em inglês?

- ◯ Sim
- ◯ Não

Qual recurso?

12. Você conversa em inglês fora da sala de aula?

- ☐ Sim, com meus colegas de classe.
- ☐ Sim, com alunos de inglês de outras instituições.
- ☐ Sim, com nativos da língua
- ☐ Não converso em inglês fora de sala de aula.
- ☐ Outro (especifique) ou Comentários

Appendix B

SERVIÇO PÚBLICO FEDERAL
UNIVERSIDADE FEDERAL DO PARÁ

Termo de Permissão

Autorizo a execução do projeto de pesquisa intitulado *"O Desenvolvimento da Produção Oral em Lingua Inglesa Através do Aplicativo Whatsapp: Uma Pesquisa-Ação no Contexto de Formação Inicial de Professores de Lingua Inglesa"*, coordenado pelo professor Me. Anderson Francisco Guimarães Maia a fim de cumprir as exigências parciais para obtenção do título de Doutor em Estudos Linguísticos da Universidade Federal de Minas Gerais.

Soure, 08 de agosto de 2017

Anderson Francisco Guimarães Maia
Coordenador Geral do Campus Universitário do Marajó/Soure
Portaria 1.457/2017 - Reitoria

Appendix C

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

Título do projeto: O Desenvolvimento da Produção Oral em Língua Inglesa Através do Aplicativo WhatsApp: uma Pesquisa-Ação no Contexto de Formação Inicial de Professores de Língua Inglesa

Pesquisador responsável: Anderson Francisco Guimarães Maia

Orientadora: Dr. Ricardo Augusto de Souza

Instituição: Universidade Federal do Minas Gerais

E-mail: maia.afg@gmail.com

Telefone: (91) 98333-0910

Local de coleta de dados: Universidade Federal do Pará / Campus Universitário do Marajó-Soure

O projeto acima descrito tem como objetivo investigar o uso do aplicativo WhatsApp como recurso para o desenvolvimento da produção oral em língua inglesa como língua estrangeira e avaliar as experiências dos participantes neste ambiente de aprendizado móvel. Para tanto, é de fundamental importância que os participantes selecionados compreendam o seu papel durante a realização desta pesquisa bem como as questões éticas envolvidas.

Todas informações coletadas durante entrevistas, formulários, questionários, ou outros instrumentos de geração de dados serão tratadas de forma sigilosa e com total proteção à identidade do(a) participante. A participação é inteiramente voluntária e sua performance durante a execução desta pesquisa em nada irá afetar sua avaliação no curso de Letras – Língua Inglesa da Universidade Federal do Pará. Espera-se que os participantes se envolvam em todas as etapas desta pesquisa, porém são resguardados ao direito de desistirem a qualquer momento.

O uso dos aparelhos celulares e o conteúdo produzido durante a realização das atividades desta pesquisa são de inteira responsabilidade de cada participante. É recomendável que o conteúdo produzido seja para contribuir com o objetivo deste projeto e para cumprir com suas atividades. Conteúdos impróprios ou que de alguma forma sejam ofensivos serão deletados, sendo seu autor convidado a retirar-se do projeto de pesquisa.

Os participantes serão beneficiados com créditos de sua operadora para acessar pacotes de dados de internet, bem como o acesso a locais de rede sem fio a fim de viabilizar a realização das atividades deste trabalho. A participação nesta pesquisa é isenta de qualquer despesa pelo sujeito participante.

A geração de dados será realizada entre setembro de 2017 e junho de 2018, sendo sua tabulação final concluída em setembro de 2018, ficando-lhe garantido o acesso aos resultados desta pesquisa e o direito de retirar o consentimento a qualquer momento do estudo sem nenhum prejuízo ou penalidade.

Esta pesquisa busca propor uma forma de desenvolver a produção oral dos alunos matriculados no curso de Letras – Língua Inglesa da Universidade Federal do Pará e os dados gerados durante a pesquisa poderão ser usados para subsidiar outras pesquisas neste âmbito como forma de auxiliar futuros professores de Língua Inglesa em sua formação inicial.

Consentimento da participação da pessoa como sujeito

Eu, _____, RG _____, CPF _____, abaixo assinado, concordo em participar da pesquisa intitulada *"O Desenvolvimento da Produção Oral em Língua Inglesa Através do Aplicativo* WhatsApp*: Uma Pesquisa-Ação no Contexto de Formação Inicial de Professores de Língua Inglesa"* como sujeito. Compreendi as informações descritas neste termo. Concordo voluntariamente a participar deste estudo e poderei retirar meu consentimento a qualquer momento, sem prejuízo ou penalidades.

Soure, ____de _____ de 2017.

Assinatura do participante: _____

Presenciamos a solicitação de consentimento, esclarecimentos sobre a pesquisa e aceite do sujeito em participar:

Testemunhas (não ligadas à equipe de pesquisadores)

Nome: _____

RG: _____Assinatura: _____

Nome: _____

RG: _____Assinatura: _____

Declaro que obtive de forma apropriada e voluntária o Consentimento Livre e Esclarecido deste sujeito de pesquisa para participação neste estudo.

Soure, ____de _____ de 2017.

Assinatura do pesquisador responsável: _____

Endereço do pesquisador responsável: Travessa Quarta, 883. São Pedro 68870-000 Soure, PA.

Appendix D

Touchstone Level 1 Scope and sequence

	Functions / Topics	Grammar	Vocabulary	Conversation strategies	Pronunciation
Unit 1 ***All about you*** *pages 1–10*	▪ Say hello and good-bye ▪ Introduce yourself ▪ Exchange personal information (names, phone numbers, and e-mail addresses) ▪ Spell names ▪ Thank people	▪ The verb *be* with *I*, *you*, and *we* in statements, *yes-no* questions, and short answers ▪ Questions with *What's . . . ?* and answers with *It's . . .*	▪ Expressions to say hello and good-bye ▪ Numbers 0–10 ▪ Personal information ▪ Everyday expressions	▪ Ask *How about you?* ▪ Use everyday expressions like *Yeah* and *Thanks*	▪ Letters and numbers ▪ E-mail addresses
Unit 2 ***In class*** *pages 11–20*	▪ Ask and say where people are ▪ Name personal items and classroom objects ▪ Ask and say where things are in a room ▪ Make requests ▪ Give classroom instructions ▪ Apologize	▪ The verb *be* with *he*, *she*, and *they* in statements, *yes-no* questions, and short answers ▪ Articles *a*, *an*, and *the* ▪ *This* and *these* ▪ Noun plurals ▪ Questions with *Where . . . ?* ▪ Possessives *'s* and *s'*	▪ Personal items ▪ Classroom objects ▪ Prepositions and expressions of location	▪ Ask for help in class ▪ Respond to *Thank you* and *I'm sorry*	▪ Noun plural endings
Unit 3 ***Favorite people*** *pages 21–30*	▪ Talk about favorite celebrities ▪ Describe people's personalities ▪ Talk about friends and family	▪ Possessive adjectives ▪ The verb *be* in statements, *yes-no* questions, and short answers (summary) ▪ Information questions with *be*	▪ Types of celebrities ▪ Basic adjectives ▪ Adjectives to describe personality ▪ Family members ▪ Numbers 10–101	▪ Show interest by repeating information and asking questions ▪ Use *Really?* to show interest or surprise	▪ *Is he . . . ?* or *Is she . . . ?*
***Touchstone* checkpoint Units 1–3 pages 31–32**					

Unit 4 ***Everyday life*** *pages 33–42*	▪ Describe a typical morning in your home ▪ Discuss weekly routines ▪ Get to know someone ▪ Talk about lifestyles	▪ Simple present statements, *yes-no* questions, and short answers	▪ Verbs for everyday activities ▪ Days of the week ▪ Time expressions for routines	▪ Say more than *yes* or *no* when you answer a question ▪ Start answers with *Well* if you need time to think, or if the answer isn't a simple *yes* or *no*	▪ *-s* endings of verbs
Unit 5 ***Free time*** *pages 43–52*	▪ Discuss free-time activities ▪ Talk about TV shows you like and don't like ▪ Talk about TV-viewing habits	▪ Simple present information questions ▪ Frequency adverbs	▪ Types of TV shows ▪ Free-time activities ▪ Time expressions for frequency ▪ Expressions for likes and dislikes	▪ Ask questions in two ways to be clear and not too direct ▪ Use *I mean* to repeat your ideas or to say more	▪ *Do you . . . ?*
Unit 6 ***Neighborhoods*** *pages 53–62*	▪ Describe a neighborhood ▪ Ask for and tell the time ▪ Make suggestions ▪ Discuss advertising	▪ *There's* and *There are* ▪ Quantifiers ▪ Adjectives before nouns ▪ Telling time ▪ Suggestions with *Let's*	▪ Neighborhood places ▪ Basic adjectives ▪ Expressions for telling the time	▪ Use *Me too* or *Me neither* to show you have something in common with someone ▪ Respond with *Right* or *I know* to agree with someone, or to show you are listening	▪ Word stress

***Touchstone* checkpoint Units 4–6 pages 63–64**

Listening	***Reading***	***Writing***	***Vocabulary notebook***	***Free talk***
▪ Recognize responses to hello and good-bye *Memberships* ▪ Listen for personal information, and complete application forms	▪ Different types of identification cards and documents	▪ Complete an application	*Meetings and greetings* ▪ Write new expressions with their responses	*Meet a celebrity.* ▪ Class activity: Introduce yourself and complete name cards for three "celebrities"
Who's absent? ▪ Listen to a classroom conversation, and say where students are *Following instructions* ▪ Recognize classroom instructions	▪ Classroom conversations	▪ Write questions about locations	*My things* ▪ Link things with places	*What do you remember?* ▪ Pair work: How much can you each remember about a picture?
Friends ▪ Listen to three people's descriptions of their friends, and fill in the missing words	▪ A family tree	▪ Write questions about people	*All in the family* ▪ Make a family tree	*Talk about your favorite people.* ▪ Pair work: Score points for each thing you say about your favorite people

***Touchstone* checkpoint Units 1–3 pages 31–32**

What's the question? ▪ Listen to answers and infer the questions *Teen habits* ▪ Listen for information in a conversation, and complete a chart about a teenager's habits	*In the lifetime of an average American . . .* ▪ A magazine article describing how much time people spend on daily activities over a lifetime	▪ Write an e-mail message about a classmate ▪ Use capital letters and periods	*Verbs, verbs, verbs* ▪ Draw and label simple pictures of new vocabulary	*Interesting facts* ▪ Class survey: Ask questions to compare your classmates with the average New Yorker
What do they say next? ▪ Listen to conversations and predict what people say next *Using computers* ▪ Listen for the ways two people use their computers	*Are you an Internet addict?* ▪ A magazine article and questionnaire about Internet use	▪ Write a message to a Web site about yourself ▪ Link ideas with *and* and *but*	*Do what? Go where?* ▪ Write verbs with the words you use after them	*Play a board game.* ▪ Pair work: Do the activities and see who gets from class to Hawaii first
What's on this weekend? ▪ Listen to a radio broadcast for the times and places of events *City living* ▪ Listen for topics in a conversation, and then react to statements	*Classifieds* ▪ A variety of classified ads from a local newspaper	▪ Write an ad for a bulletin board ▪ Use prepositions for time and place: *between, through, at, on, for,* and *from . . . to . . .*	*A time and a place . . .* ▪ Link times of the day with activities	*Find the differences.* ▪ Pair work: List all the differences you find between two neighborhoods

Touchstone checkpoint Units 4–6 pages 63–64

	Functions / Topics	Grammar	Vocabulary	Conversation strategies	Pronunciation
Unit 7 **Out and about** *pages 65–74*	▪ Describe the weather ▪ Leave phone messages ▪ Talk about sports and exercise ▪ Say how your week is going ▪ Give exercise advice	▪ Present continuous statements, *yes-no* questions, short answers, and information questions ▪ Imperatives	▪ Seasons ▪ Weather ▪ Sports and exercise with *play, do,* and *go* ▪ Common responses to good and bad news	▪ Ask follow-up questions to keep a conversation going ▪ React with expressions like *That's great!* and *That's too bad.*	▪ Stress and intonation in questions
Unit 8 **Shopping** *pages 75–84*	▪ Talk about clothes ▪ Ask for and give prices ▪ Shop for gifts ▪ Discuss shopping habits	▪ *Like to, want to, need to,* and *have to* ▪ Questions with *How much . . . ?* ▪ *This, these; that, those*	▪ Clothing and accessories ▪ Jewelry ▪ Colors ▪ Shopping expressions ▪ Prices ▪ "Time to think" expressions ▪ "Conversation sounds"	▪ Take time to think using *Uh, Um, Well, Let's see,* and *Let me think* ▪ Use "sounds" like *Uh-huh* to show you are listening, and *Oh* to show your feelings	▪ *Want to* and *have to*
Unit 9 **A wide world** *pages 85–94*	▪ Give sightseeing information ▪ Talk about countries you want to travel to ▪ Discuss international foods, places, and people	▪ *Can* and *can't*	▪ Sightseeing activities ▪ Countries ▪ Regions ▪ Languages ▪ Nationalities	▪ Explain words using *a kind of, kind of like,* and *like* ▪ Use *like* to give examples	▪ *Can* and *can't*

Touchstone checkpoint Units 7–9 pages 95–96

Unit 10 **Busy lives** *pages 97–106*	▪ Ask for and give information about the recent past ▪ Describe the past week ▪ Talk about how you remember things	▪ Simple past statements, *yes-no* questions, and short answers	▪ Simple past irregular verbs ▪ Time expressions for the past ▪ Fixed expressions	▪ Respond with expressions like *Good luck, You poor thing,* etc. ▪ Use *You did?* to show that you are interested or surprised, or that you are listening	▪ *-ed* endings
Unit 11 **Looking back** *pages 107–116*	▪ Describe experiences such as your first day of school or work ▪ Talk about a vacation ▪ Tell a funny story	▪ Simple past of *be* in statements, *yes-no* questions, and short answers ▪ Simple past information questions	▪ Adjectives to describe feelings ▪ Expressions with *go* and *get*	▪ Show interest by answering a question and then asking a similar one ▪ Use *Anyway* to change the topic or end a conversation	▪ Stress and intonation in questions and answers
Unit 12 **Fabulous food** *pages 117–126*	▪ Talk about food likes and dislikes and eating habits ▪ Make requests and offers ▪ Invite someone to a meal ▪ Make recommendations	▪ Countable and uncountable nouns ▪ *How much . . . ?* and *How many . . . ?* ▪ *Would you like (to) . . . ?* and *I'd like (to) . . .* ▪ *Some* and *any* ▪ *A lot of, much,* and *many*	▪ Foods and food groups ▪ Expressions for eating habits ▪ Adjectives to describe restaurants	▪ Use *or something* and *or anything* to make a general statement ▪ End *yes-no* questions with *or . . . ?* to be less direct	▪ *Would you . . . ?*

Touchstone checkpoint Units 10–12 pages 127–128

Listening	Reading	Writing	Vocabulary notebook	Free talk
How's your week going? ▪ Listen to people talk about their week, and react appropriately *Do you enjoy it?* ▪ Listen to conversations and identify what type of exercise each person does and why he or she enjoys it	*Don't wait – just walk!* ▪ An article about the benefits of walking for exercise	▪ Write a short article giving advice about exercise ▪ Use imperatives to give advice	*Who's doing what?* ▪ Write new words in true sentences	*What's hot? What's not?* ▪ Group work: Discuss questions about current "hot" topics
I'll take it. ▪ Listen to conversations in a store, and write the prices of items and which items people buy *Favorite places to shop* ▪ Listen to someone talk about shopping, and identify shopping preferences and habits	*Shopping around the world* ▪ An article about famous shopping spots around the world	▪ Write a recommendation for a shopper's guide ▪ Link ideas with *because* to give reasons	*Nice outfit!* ▪ Label pictures with new vocabulary	*How do you like to dress?* ▪ Class activity: Survey classmates about the things they like to wear
National dishes ▪ Listen to a person talking about international foods, and identify the foods she likes *What language is it from?* ▪ Listen to a conversation, and identify the origin and meaning of words	*The travel guide* ▪ A page from a travel Web site with information, pictures, and travel advice	▪ Write a paragraph for a Web page for tourists ▪ Use commas in lists	*People and nations* ▪ Group new vocabulary in two ways	*Where in the world . . . ?* ▪ Pair work: Name different countries or cities where you can do interesting things

Touchstone checkpoint Units 7–9 pages 95–96

What a week! ▪ Listen to people describe their week, and choose a response *Don't forget!* ▪ Listen for how people remember things, and identify the methods they use	*Ashley's journal* ▪ A week in Ashley's life from her personal journal	▪ Write a personal journal ▪ Order events with *before*, *after*, *when*, and *then*	*Ways with verbs* ▪ Write down information about new verbs	*Yesterday . . .* ▪ Pair work: Use the clues in a picture to "remember" what you did yesterday
Weekend fun • Listen to a conversation about last weekend, and identify main topics and details *Funny stories* • Listen to two stories, identify the details, and then predict the endings	*Letters from our readers* ▪ A letter telling a funny story about a reader's true experience	▪ Complete a funny story ▪ Use punctuation to show direct quotations or speech	*Past experiences* ▪ Use a time chart to log new vocabulary	*Guess where I went on vacation.* ▪ Group work: Ask and answer questions to guess where each person went on vacation
Lunchtime ▪ Listen to people talking about lunch, and identify what they want; then react to statements *Do you recommend it?* ▪ Listen to someone tell a friend about a restaurant, and identify important details about it	*Restaurant guide* ▪ Restaurant descriptions and recommendations	▪ Write a restaurant review ▪ Use adjectives to describe restaurants	*I love to eat!* ▪ Group vocabulary by things you like and don't like	*Do you live to eat or eat to live?* ▪ Class activity: Survey classmates to find out about their eating habits

***Touchstone* checkpoint Units 10–12 pages 127–128**

Appendix E

ORAL PROFICIENCY TEST SHEET

SECTION I – READ ALOUD

Word List

1ST READING

1. School
2. House
3. Number
4. Profession
5. Table
6. Interesting
7. Dancing
8. Thursday
9. Restaurant
10. Study
11. Identity
12. Portuguese
13. Purple
14. Neighborhood
15. Strawberries
16. Cooked
17. Wanted
18. Played
19. Where
20. Were

2ND READING

1. School
2. House
3. Number
4. Profession
5. Table
6. Interesting

7. Dancing
8. Thursday
9. Restaurant
10. Study
11. Identity
12. Portuguese
13. Purple
14. Neighborhood
15. Strawberries
16. Cooked
17. Wanted
18. Played
19. Where
20. Were

3RD READING

1. School
2. House
3. Number
4. Profession
5. Table
6. Interesting
7. Dancing
8. Thursday
9. Restaurant
10. Study
11. Identity
12. Portuguese
13. Purple
14. Neighborhood
15. Strawberries
16. Cooked
17. Wanted
18. Played
19. Where
20. Were

ORAL PROFICIENCY TEST SHEET

SECTION II – READ ALOUD

List of Sentences

1ST READING

1. What's your phone number?
2. Are these your sunglasses?
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?

2ND READING

1. What's your phone number?
2. Are these your sunglasses?
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?

3RD READING

1. What's your phone number?
2. Are these your sunglasses?
3. My grandmother is 83 years old.
4. I don't usually get up early in the morning.
5. The restaurants in my neighborhood are not too bad.
6. There are a lot of apartment buildings there.
7. It's a quarter after three.
8. I'm reading a book about the history of the World Cup.
9. Where did you go shopping last week?
10. Do you ever make your own lunch?

Appendix F

ORAL PROFICIENCY TEST SHEET

SOCIAL INTERACTION

Question Bank

Unit 1

Hello, good morning! How are you?

Are you (name)?

What's your last name, please?

What's your phone number?

What's your e-mail address?

Unit 2

What's this under the desk?

Where are your class materials?

Are these your keys?

What's the word for this?

What's in your bag?

What's in your wallet?

Unit 3

Where are you from?

How old are you?

What are your grandparents' names?

What is your best friend like?

Is this your bother/sister?

Unit 4

What do you do on Sundays?

What do you do before bed?

Do your parents live around here?

What's a typical morning like in your home?

Unit 5

How often do you watch TV?

What do you do in your free time?

How often do you go out on weeknights?

Do you ever feel tired after class?

How often do you go shopping?

Unit 6

What time is it?

What time do you go to bed?

Is there a park where you live?

What's on this weekend? Any plays? Sports match? Music shows?

Unit 7

Do you practice any sports? Which one? How often?

How do you stay in shape?

How's your week going?

What kind of exercise do your friends do?

Unit 8

Do you like shopping?

Do you buy things on sale?

What kinds of clothes do you like to wear?

How much do you think this (show picture of clothes/accessories) is?

What color is this (show picture of clothes/accessories)?

Unit 9

What are three countries do you want to visit?

What types of food do you want to try?

Where can you take photos of amazing landscapes in Marajo?

Where can you hear traditional music in Marajo?

Unit 10

What did you do last night?

What did you do last weekend?

Did you have homework last week?

Did you make any new friends last year?

Unit 11

How was your first day of school at UFPA? Were you nervous or relaxed?

How was your vacation?

Where were you exactly?

Who did you go with?

When did you get back?

Unit 12

How much fruit do you eat a week?

How many eggs do you eat a week?

What foods are good for you?

Do you have any bad eating habits? What are they?

Appendix G

Oral Assessment Rubric

Segmental Pronunciation										
Vowel production was intelligible, and mistakes did not hinder communication.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Segmental consonants and consonant clusters were intelligible, and mistakes did not hinder communication.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Supra-segmental Pronunciation										
Intonation was meaningful and accurate.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Word and sentence stress contributed to convey the message.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Rhythm was well-paced and speech was smooth.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Communicative Competence										
Speaker demonstrated knowledge of syntax rules,	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

vocabulary words, and morphological constituents.										
Speaker demonstrated the capacity to comply with social rules and contextual demands to use grammatical forms.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Speaker demonstrated the capacity to comply with rules of politeness.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Speaker demonstrated coping strategies which compensate for linguistic and social constraints and keeps communication going.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Appendix H

Student Questionnaire

1. Como tu descreverias tua experiência de praticar conversação em inglês através do aplicativo *Whatsapp*?

- ( ) Muito satisfatória
- ( ) Satisfatória
- ( ) Pouco satisfatória

Por favor, explique:

2. As atividades de prática oral em inglês através do *Whatsapp* contribuíram para o teu desenvolvimento na língua?

- ( ) Sim
- ( ) Não
- ( ) Parcialmente

Por favor, explique:

3. Das atividades solicitadas durante o curso, quais atividades mais contribuíram para tua aprendizagem?

4. Quais atividades de prática oral através do *Whatsapp* não consideraste úteis para tua aprendizagem?

5. Como comparas tua experiência de prática oral através do *Whatsapp* com tua experiência em outros ambientes (sala de aula, conversa pessoal, uso de outros aplicativos)?

6. Que outros recursos além do *Whatsapp* utilizaste para realizar as atividades apresentadas?

7. Que estratégias utilizaste sem ajuda do professor para realizar as atividades apresentadas pelo *Whatsapp*?

8. De que forma o professor deste curso poderia melhorar a prática de produção oral através do aplicativo *Whatsapp*?

ENDNOTES

[i] According to Richards et al. (1992) *language attitudes* are "the attitudes which speakers of different languages or language varieties have towards each other's languages or to their own language" (p. 198). They also explained *language aptitude*, saying that it is "the natural ability to learn a language, not including intelligence, motivation, interest, etc" (p.199).

[ii] About the *critical period hypothesis*, J. C. Richards et al. (1992) explained that "in child development there is a period which language can be acquired more easily than at any other time. According to the biologist Lennenberg, the crucial period lasts until puberty (around age 12 or 13 years), and is due to biological development. Lennenberg suggested that language learning may be more difficult after puberty because the brain lacks the ability for adaptation. This, he believed, was because the language functions of the brain have already established in a particular part of the brain; (...)" (p.97).

[iii] J. C. Richards et al. (1992) referred to this process as *acculturation*, "in which changes in the language, culture, and system of values of a group happen through interaction with another group with a different language, culture, and system of values. For example, in second language learning, acculturation may affect how well one group (e.g. a group of immigrants in a country) learn the language of another (e.g. the dominant group)" (p.92). D Larsen-Freeman and Long (1991) added four factors at the individual level for the process of acculturation: language shock, cultural shock, motivation and ego permeability.

[iv] The literature in Applied Linguistics use the term *appropriateness*. J. C. Richards et al. (1992) explained that appropriateness happens "when producing a utterance, a speaker needs to know that it is grammatical, and also that it is suitable (appropriate) for the particular situation" (p.20).

[v] J. C. Richards et al. (1992) refer to *correctness* as "a term which is used to state that particular language usage, e.g. the pronunciation of a word is right opposed to wrong" (p.89).

[vi] Richards and Schmidt (2013) explain that "*intake* is what is processed by the learner" (p.23).

[vii] According to Richards, Platt, and Platt (1992) , *epenthesis* is "the addition of a vowel or consonant at the beginning of a word or between sounds" (p.126).

[viii] According to Richards, Platt and Platt (1992, p.249, 250), slashes / / are used for phonemic notation while square brackets [ ] are used for phonetic notation. Phonemic notation "uses only the distinctive sounds of a language. (...) It does not show the finer points of pronunciation" (...) and phonetic notation "is used to show in detail how a particular sound is pronounced. It is used to show finer points of pronunciation".