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SPANISH FOR EMERGENCY ROOM NURSES: A TASK-BASED NEEDS ANALYSIS FOR
A LANGUAGES FOR SPECIFIC PURPOSES CONTEXT

by

Lindsay L. Helms

A Dissertation

Submitted in Partial Fulfillment of the

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Doctor of Philosophy

Major: Applied Linguistics

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May 2023

Dedicated to

My grandfather

Bob Lee Dailey

and

My daughter

Coday Leigh Helms

Acknowledgments

I would like to first thank God for this opportunity. “But whatever gain I had, I counted as loss for the sake of Christ. Indeed, I count everything as loss because of the surpassing worth of knowing Christ Jesus my Lord” (Philippians 3: 7-8a).

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Abstract

Language barriers in medical settings can impede access to healthcare and increase the risk of medical error for limited English proficiency (LEP) patients, especially in emergency situations (Bender et al., 2004; Martinez, 2010). Nurses who are competent in their patient's first language can decrease the risk of these issues and care more effectively for their LEP patients (Altstaedter, 2017; Fernandez et al., 2011). However, general foreign language courses do not prepare students for communication in medical settings, and there are few language courses specifically for emergency room (ER) nurses (Amerson & Burgins, 2005; Hardin, 2015). This dissertation will present the results of a study drawing on Task-Based Language Teaching (TBLT) and Languages for Specific Purposes (LSP) to conduct a task-based needs analysis (NA) to 1) determine the Spanish language needs of primarily English-speaking emergency room nurses in the Southeastern US and 2) inform the design of a potential Spanish for ER Nursing course. This mixed-methods study included three phases of both data collection and analysis, adapted from Serafini and Torres (2015) and Malicka et al. (2019). In Phase 1, a variety of open-ended measures were used to determine tasks common in ER settings as reported by each type of participant. In Phase 2, participants rated the frequency and importance of these tasks. In Phase 3, the participants reviewed the list of tasks in follow-up interviews. Results are presented as a series of tasks performed in the ER context, ranked according to frequency and importance. This study adds to existing LSP research that has to date been limited regarding studies in non-English contexts and improves upon methodological limitations in previous studies that have used a NA. The findings of this study will inform future curricular decisions in a Spanish for ER nursing course as well as address the healthcare inequalities experienced by LEP patients.

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Key to Abbreviations

CT	Category Task (CT)
DS	Domain Superior (DS)
DE	Domain Expert (DE)
DI	Domain Insider (DI)
ESL	English as a Second Language (ESL)
ER	Emergency Room (ER)
LEP	Limited English proficiency (LEP)
LSP	Languages for Specific Purposes (LSP)
NP	Nursing Program (NP)
P1	Phase 1 (P1)
P2	Phase 2 (P2)
P3	Phase 3 (P3)
SSP	Spanish for Specific Purposes (SSP)
ST	Sub Task (ST)
TBLT	Task-Based Language Teaching (TBLT)

CHAPTER 1: INTRODUCTION

In the last decade, there has been a considerable increase in the number of limited English-speaking households in the United States. In 2019, there were an estimated five million households that spoke limited English, and of those households, three million were native Spanish speakers (U.S. Census Bureau, 2019). Hospitals, clinics, doctors' offices, and other healthcare facilities have also seen an unprecedented influx of limited English proficiency (LEP) patients, especially Spanish-speaking patients. It should be noted that the marker, "LEP," especially in medical contexts, has been "frequently tied to global assumptions about proficiency and deficit views of language that position minority language speakers as deficient" (Showstack et al., 2019); however, the term is used in this dissertation because of its universal usage for the sake of clarity and understanding. It is well-documented that linguistic barriers in healthcare facilities and linguistic marginalization of LEP speakers (Showstack et al., 2019; Nielson-Bohlman et al., 2004) can lead to unequal access to healthcare (Bender et al., 2004; Martinez, 2010). Like other medical settings, ERs are also experiencing inequalities in access to health care and language for LEP patients. In a study by Ginde et al. (2008) on emergency departments in Boston, only 15% of minority language speaking patients received interpreter services despite a law mandating such services (U.S. Department of Health and Human Services).

While interpreters can certainly help alleviate inequalities in access to healthcare for LEP patients, research shows that the use of interpreters in medical settings is fraught with its own issues. For one, the use of interpreters is still quite low (Martinez, 2015). This can be attributed to several reasons; however, two main concerns are that the cost of hiring interpreters is high and the fact that using an interpreter can be time-consuming, taking away from the attention of other

patients. Furthermore, research findings show that nurses and doctors are more likely to rely on their own limited second language proficiency rather than go to the trouble of seeking assistance from an interpreter (Diamond et al., 2012). There is research to show that ad hoc interpreters, those that are used on an impromptu basis, are more likely to make language errors which can have devastating medical consequences for patients (Flores, 2006; Flores, 2012; Flores et al., 2003). Often the burden of interpretation and cultural brokering is placed on family members, even patients' children (Chen et al., 2007; Reynolds & Orellana, 2015; Kim et al., 2020). While the US has passed legislation—such as the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in 2001 and 2013—to provide culturally appropriate language assistance services (U.S. Department of Health and Human Services, 2022), the implementation of these standards varies by state; therefore, there is still much work to be done in language rights in healthcare settings.

One such avenue for improving health care inequalities for LEP individuals is through education of healthcare providers. Research has shown that healthcare workers, such as nurses, who are proficient in Spanish and familiar with Latino culture can provide more effective care to their Spanish-speaking LEP patients (Hardin, 2015; Altstaedter, 2017; Fernandez et al., 2011). Although there is an obvious need for Spanish-speaking nurses in U.S. healthcare facilities, most nursing programs only require language as an elective or, in most cases, no language at all (Amerson & Burgins, 2005; Hardin, 2015). The language courses that are offered to healthcare providers are usually traditional, general language classes. These courses often do not meet the needs of nurses who want to extend their linguistic knowledge to their future careers. Second Language Acquisition (SLA) research has shown that traditional language courses are not conducive to the highest levels of language proficiency. Traditional approaches to language

learning of the 50s and 60s—which were primarily teacher-dominated, form-focused and employed a Present-Practice-Produce (PPP) methodology (Samuda & Bygate, 2009)—taught language as a system of discrete units that were learned sequentially (Van den Branden et al., 2009). However, due to the influence of educational thinkers and ground-breaking second language acquisition (SLA) findings, these early approaches were replaced by more communicative-based methods (Hymes, 1971; Widdowson, 1978; Brumfit, 1984). SLA researchers and instructors discovered that traditional structural syllabi were not reflective of how learners acquire languages, and that language is more readily acquired through interaction with the speakers of the language and the language itself (Prabhu, 1987). These communicative methods of language learning led to several alternative options to the traditional, general language course.

One such alternative is Languages for Specific Purposes (LSP) which arose in the latter half of the 20th century due to shifts in the field of SLA and society (Zrníková, 2015). LSP is distinctive from conventional language courses in that it is based on the specific needs of its students (Belcher, 2009). LSP courses are also recognizable by their focus on a specialized field or domain. All aspects of the course—syllabus, materials, etc.—are representative of both the individual's needs and the specific domain. Ideally, instructors are experts in both language teaching and the target discipline as well as sensitive to the needs of their individual students (Dudley-Evans & St. John, 1998). Although interest in LSP has been on the rise in the U.S. for the last couple of decades, progress in the field has been stifled by several key issues. For instance, most LSP courses and LSP literature is focused on English for Specific Purposes (ESP), excluding other languages (Lafford, 2012). Besides an expansion of languages, the field of LSP would also benefit from partnering with experts from other disciplines and the community in its

teaching of language. Finally, LSP's focus on course design and lack of research on course implementation is one of its most persistent issues.

A sub-field of LSP is Spanish for Specific Purposes (SSP). Because Spanish has been the most popular foreign language choice in the United States since the 70s, SSP has particularly taken off in U.S. foreign language programs (Brown, 2018). Like LSP, SSP is attentive to learners' specific needs as well as the students' proficiency level, the degree of urgency for competence in the language, and the characteristics of the target discipline (Sánchez-López, 2010). The population of students who take SSP courses come from a variety of backgrounds. In most cases, students enrolled in an SSP course have some general language proficiency, meaning that the course can expand on that linguistic knowledge instead of starting at the beginning levels (Sánchez-López, 2006). There are, of course, several criticisms regarding SSP courses such as a lack of research on the overall effectiveness of these courses in achieving language acquisition (Serafini & Torres, 2015) and lack of training available for SSP instructors (Diamond and Reuland, 2009; Diamond et al., 2012). Both of these critiques apply to the field of LSP in general as well.

A specific type of SSP course is Spanish for Healthcare, though called by many different names such as Medical Spanish, Spanish for Medical Care, etc. This area gained momentum in response to a concern for the healthcare inequalities for LEP patients delineated previously (Timmins, 2002). While early research was devoted to creating instructional materials in 'medical Spanish,' recent studies have taken on the actual teaching of Spanish for Healthcare to medical providers (Martinez, 2015). As these courses have developed, they have taken on more specific names to represent the learners they target such as Spanish for Emergency Room Nursing, etc. Despite the increase in studies dedicated to such courses, there is controversy

concerning whether healthcare workers such as nurses should be required to learn Spanish in their undergraduate programs (Krowchuk & Karb, 2004; Krowchuk & Moore, 2004). Typical Spanish for Healthcare courses are often criticized for being unable to provide healthcare professionals with the measure of fluency required for communication with patients in a real-life medical setting (Krowchuk & Moore, 2004). According to Lear (2006), Spanish for Healthcare would benefit from a focus on Spanish used in the actual workplace, warranting a complete surrender of traditional approaches and an adherence to stated goals of LSP such as domain-specificity.

Yet another alternative to traditional language courses is Task-Based Language Teaching (TBLT), an approach to teaching that revolves around the ‘task’ which prioritizes authentic language, meaning, and communication (Long, 2015). TBLT is distinctive from other methods utilizing tasks in that it is designed and structured around the ‘task,’ using tasks as the unit of organization in the course (Nunan, 1988). ‘Task’ places meaning at its center, has an achievable goal, a defined outcome, and a connection with the real-world (Skehan, 1998, p. 268). According to Long (2015), TBLT is superior to other teaching approaches because it is consistent with current and evolving SLA research. For example, it rejects both the synthetic and structural syllabi for the adoption of a ‘focus on form’ approach (Long, 2015; Prabhu, 1987). While synthetic and structural syllabi mistakenly assume that learners acquire language in a linear fashion by presenting target forms one at a time, a ‘focus on form’ approach assumes that learners acquire language through an interlanguage system where the target form begins as a non-native-like utterance and becomes increasingly more native-like as the learner continues to practice the form (Selinker, 1972; Long, 1991). The approach straddles the line between implicit and explicit learning by focusing primarily on meaning while at the same time explicitly

directing attention to certain target forms (Long, 2015). Another argument for the superiority of TBLT is that the approach is driven by learners' specific needs, recognizing the need to create individualized courses (Van Avermaet & Gysen, 2006). In fact, the first step of a TBLT course is the task-based needs analysis (NA) which is “the systematic collection and analysis of all information necessary for defining a defensible curriculum” (Brown, 2009, 269). As with any language approach, there are a variety of criticisms of TBLT such as the lack of research on the effectiveness of tasks in the classroom and the lack of precision in defining ‘task.’ Nevertheless, TBLT has made numerous developments in a relatively short amount of time and is now considered an empirically based research program as well as an increasingly popular approach to teaching second languages (Robinson, 2011; Long, 2015).

TBLT and LSP interact in many ways, especially in the value each approach places on specific learners’ needs in its use of a NA (Long, 2015; Dudley-Evans & St. John, 1998). They also both recognize a need for authentic or real-world language use in the classroom. Not only do LSP and TBLT share various features and goals, but both approaches also have much to offer the other. For example, TBLT can offer a theoretical framework and research base that LSP often lacks (Torres and Serafini, 2015). TBLT can also contribute to the subfield of SSP in that it is shown by extensive research to be effective in promoting Spanish language proficiency (González-Lloret & Nielson, 2015). On the other hand, LSP can offer TBLT the notoriety and global recognition that LSP has demonstrated in its longevity and widespread interest (Van den Branden, 2006). An effective example of merging the two approaches would be the use of the task-based needs analysis (NA) in an LSP context which has been implemented in several studies, some of which will be detailed in the following chapter (Serafini & Torres, 2015; Malicka et al., 2019; Hattani, 2020).

Despite the permeance of NAs in several fields, there have been a variety of limitations and inconsistencies in the methodology of such studies that have only been addressed recently. For one, many past NA studies only presented their findings, meaning that literature on the actual methodology of the NA itself was scant (Long, 2005; Serafini et. al., 2015); however, the importance of NA methodology in research has been growing in recent years (Serafini, 2022). One aspect in which previous NA methodology has lacked and is now improving is in triangulation—the comparison of various sets of data such as sources, methods, etc. (Long, 2005). Triangulation is beneficial in that it verifies results and adds a degree of credibility to the study (Jasso-Aguilar, 1999). Another limitation prevalent in NA studies has been the imposition of the researcher’s own insights on the data collected (Long, 2005). The researcher or linguist is prone to draw conclusions about the data during the process of translating participants’ responses from the NA into linguistic measures. Future studies have sidestepped these limitations by being transparent in reporting methodology behind the NA, increasing credibility with triangulation, and using a common language for communication between researcher and participants, all of which are demonstrated in the present research.

Purpose of the Research

The current research merges a TBLT research framework with the domain-specificity of LSP to identify the Spanish language needs of non-Spanish speaking, English-speaking ER nurses through a task-based NA. The results of the NA will be presented as a series of tasks performed in the emergency room context, ranked according to frequency and importance. The purpose of this list of tasks is to inform a potential Spanish for Emergency Room Nursing course. This study is relevant and vital in several ways. First, it adds to existing LSP and SSP literature and research that has to date been limited regarding studies in non-English contexts.

Second, it improves upon methodological limitations in past NA studies and implements recent recommendations for and improvements to NA methodology. Finally, it reacts to the healthcare inequalities that have dire consequences for LEP, Spanish-speaking patients.

Statement of the Problem

Language barriers in medical settings can impede access to healthcare and increase the risk of medical error for limited English proficiency (LEP) patients. The use of interpreters and the laws requiring the implementation of these services is still lacking in many states. One way to mitigate the negative impacts of the language barrier in healthcare and the shortcomings of interpreting services is through education of healthcare providers. Nurses who are competent in their patient's first language and culturally aware can decrease the risk of these issues and care more effectively for their LEP patients. However, there are few programs and institutions that offer second language courses specifically for nurses, and many of these courses are general language courses which are shown to be less effective than language courses specifically designed for learners. LSP courses which are domain-specific, sensitive to individual needs, and cognizant of the importance of real-world language use would serve as a potential solution; however, this approach needs a stronger research base and methodological framework. TBLT, with its shared values of individuality and real-world connection, can offer a solid research foundation and structure that stems from its adherence to SLA research. The task-based NA is the first step in informing the design of such a course.

Research Question

The current study argues that a task-based NA would offer a potential Spanish for Emergency Room Nursing course both a firm research base and a concrete methodological framework that would work in concert with its shared values with LSP such as a concern for learners' specific needs, a focus on specific disciplines, and an emphasis on real-world language use. Therefore, this study will use a task-based NA to decide the most pressing needs, in the form of tasks, of emergency room (ER) nurses to inform syllabus design for a potential Spanish for Emergency Room Nursing course. The following research question will be addressed:

What are the Spanish language needs, in terms of tasks, of non-Spanish-speaking, English-speaking ER nurses in hospitals in the Southeastern U.S. as reported by:

1. Domain Superiors (DSs)—ER managers, head nurses, and nursing faculty?
2. Domain Experts (DEs)—ER nurses and advanced nursing students?
3. Domain Insiders (DIs)—Spanish-speaking, LEP former patients?

CHAPTER 2: LITERATURE REVIEW

This section will review the literature and research concerning three important topics informing the current study: 1) Languages for Specific Purposes (LSP), 2) Task-Based Language Teaching (TBLT) and 4) Previous Literature on Needs Analyses (NAs).

Languages for Specific Purposes (LSP)

Many of the efforts to instruct medical providers in a second language have derived from the field of Languages for Specific Purposes (LSP). LSP research is often conducted in the context of English for Specific Purposes (ESP), an area of study within LSP. LSP and ESP are both quite similar and are often exchangeable throughout the literature because of the field's primary focus on English contexts. For the sake of clarity, the term LSP will be used to refer to the general, overarching field and research that encompasses subfields such as ESP. The field of LSP grew out of a result of several social changes in the second half of the 20th century that led to a growing interest in learning a second language and a more positive view of foreign language learning (Zrníková, 2015). Other precursors were advancements in the field of linguistics such as the emergence of the communicative approach to language teaching. By the 1960s, the idea of creating specific language courses for the professions became widely recognized as a viable option for language teaching (Dudley-Evans & St. John, 1998).

LSP courses were distinctive from traditional or general language courses at the time in that they centered their content, materials, and syllabus on a specific set of needs for a specific population (Belcher, 2009). This focus on specific needs permeates nearly every aspect of LSP course design and implementation: an analysis of needs prior to, during, and after the course, creating materials that are complementary to these needs, and enlisting support of instructors

who are sensitive to those needs (Dudley-Evans & St. John, 1998). The role and responsibility of the LSP instructor is often more demanding than that of the general language educator in that the LSP instructor must be prepared to inhabit spaces that might be unfamiliar or challenging (Belcher, 2009). There also comes with LSP a substantial amount of retrospection on the part of the educator as he or she must constantly assess whether the specific needs of the learners are being met. Therefore, in an LSP course, the instructor is a vital mechanism in the creation and implementation of the course and materials.

After the initial entrance of LSP onto the language learning stage in the 1960s, the field began to take root as a language teaching and learning approach in both the United States and in a global context. At the beginning of the twentieth century, Grosse and Voght (1991) expressed that LSP had come of age in the United States, bolstering their claim with evidence from their survey of LSP course offerings and programs throughout the U.S. as well as a rationale for LSP as a language approach and as a research base. Although the authors were right in that support of and interest in LSP was certainly on the rise, they were premature in their assertion that LSP had fully matured into a generally and widely accepted language teaching approach (Lafford, 2012). Since the initial 1991 survey, there has been significant progress, though more subtle than previously hoped for by Grosse and Voght. Long and Uscinski (2012) replicated Grosse and Voght's survey and saw several changes in LSP over the last decade or so in the United States. As Long and Uscinski (2012) reported, LSP is stable as a language learning approach and in no danger of waning anytime soon. Nevertheless, there are a few strides LSP will need to take to reach the potential that Grosse and Voght first envisioned.

Uber Grosse and Voght (2012) responded to the critiques on their original 1991 survey, affirming that the evolution of LSP was a continual process. Lafford (2012) points out that for

proponents of LSP to widely implement the approach in the U.S., they will need to further establish LSP's value and credibility in both foreign language education and the overall field of SLA by addressing some persistent issues. For one, Long and Uscinski (2012) found that most of the LSP programs offered were for either Spanish or, primarily, English contexts. LSP practitioners will need to recognize the dominance of English in the field and begin to diversify and expand its offering of languages (c.f., Ruggiero, 2022). Yet another hurdle for LSP that Lafford (2012) mentions is LSP instructors' resistance to partnering with other disciplines and the community. In other words, for the research agenda of LSP proponents to advance, LSP proponents must realize the necessity of interdisciplinary cooperation and collaboration. Another major issue is that LSP researchers have tended to focus more on curriculum and course design rather than actual implementation (Lafford 2012). Both problems hinder the progress of LSP and contradict the approach's declared values.

Spanish for Specific Purposes (SSP)

A popular subfield of LSP is Spanish for Specific Purposes, or SSP. According to Brown (2018), Spanish has been the leading choice for foreign language study in the United States since the 1970s, and increasingly considered a second language. Most Spanish language courses offered in the U.S. today are general with an occasional focus on literature, history, and/or culture (Brown, 2018). These classes are typically hosted and conducted exclusively within the language department with little to no interdepartmental cooperation. Brown (2018) proposes a more contemporary design for Spanish foreign language and second language programs which includes a systematic NA and/or situation analysis to determine students' specific needs as well as cooperation with other fields and disciplines. This proposal sounds conducive to SSP, also

known as *español para los fines específicos* (EFE) a term that was coined in the 1980s when Spain entered the European Union (EU) (Beltrán et al., 2012; Sanz, 2015). Because Spain was seen as a strong commercial power in Europe, many of the first European SSP courses were centered on Spanish for business and commerce. However, it was not until after the events of 9/11 that the U.S. began to have an interest in Spanish and SSP as the country placed more value on learning languages other than English (Sánchez-López, 2010). A reform of Spanish programs in the U.S. was proposed by the MLA 2007 report, “Foreign Languages and Higher Education: New Structures for a Changed World,” which pushed for not only linguistic competence but also cultural competence as well as a variety of other reforms. It was a combined result of the unprecedented events of terrorism and the proposal by the MLA that garnered interest in implementing discipline-specific courses.

Just like LSP, SSP is focused on learners’ specific needs which makes each SSP course vary depending on the learners and a variety of other factors (Sánchez-López, 2010). Sánchez-López lists several considerations of an SSP course: the students’ proficiency level, the degree of urgency for the competence, the characteristics of the target discipline or context, and, finally, the course design. Usually, students that elect to take a SSP course have already taken some general language courses, meaning that in most cases an SSP course is an expansion and amplification of previous linguistic knowledge which, in turn, can make it difficult for SSP to separate itself from general Spanish as a FL programs (Sánchez-López, 2006). There are a couple of other criticisms regarding Spanish for Healthcare courses. (Diamond and Reuland, 2009; Diamond et al., 2012). For one, even though there is a huge demand for SSP courses, there is little research on their overall effectiveness in terms of language acquisition (Serafini &

Torres, 2015). As a result, the field lacks a strong research infrastructure to imitate in current and future studies.

Spanish for Healthcare

Spanish for Healthcare, as it will be called here, is a subsection of SSP. Spanish for Healthcare courses first appeared in the second half of the twentieth century when the field of SLA began dedicating attention and interest to the connection between healthcare and culture, specifically to how language barriers impede access to healthcare and negatively impact health outcomes (Timmins, 2002). This focus led to a natural interest in teaching language and culture to healthcare providers in hopes of improving healthcare for minority language patients. Many of the early publications researching Spanish for Healthcare were concerned with potential materials for instructing medical professionals such as textbooks, phrase books, and dictionaries (Martinez, 2015); however, a more recent avenue for research has been on the actual teaching of Spanish to medical professionals. Much of this research has centered on language proficiency of medical providers in medical settings, the effects of the language barrier on minority language speaking patients, the assessment of language acquisition in medical Spanish courses, and pedagogic innovations for Spanish for Healthcare courses.

There are several ongoing debates in the area of Spanish for Healthcare, one being the very existence of such courses. Some have questioned whether nurses should be required to learn a second language in their undergraduate programs (Krowchuk & Karb, 2004; Krowchuk & Moore, 2004). Proponents of this view argue that while there is no denying the fact that language barriers are a leading cause of unequal access to health care, a single course or even a handful of courses are not sufficient for healthcare providers to become fluent enough to communicate with patients in the medical setting (Krowchuk & Moore, 2004). In other words, why offer language

courses to healthcare providers, if they don't work? The counterargument would be that perhaps the problem lies in *how* the courses are structured and implemented rather than the courses themselves. An LSP approach and a Spanish for Healthcare design is not the average, traditional language course. Instead, an LSP course omits these traditional methods and materials and, instead, involves on-the-job language use that will actually be used in a medical setting (Lear, 2006).

There are several examples of studies evaluating Spanish for Healthcare programs or courses in the U.S. that provide insight into the challenges that arise in designing and implementing such courses. For example, one potential challenge is satisfying the needs of a wide variety of students who take Spanish for Healthcare courses. Hardin (2015) found that most students who take Spanish for Healthcare courses are language majors who know little to nothing about the medical field. Conversely, students who are considering entering the healthcare field often have limited Spanish proficiency which can delay or inhibit language acquisition (Amerson & Burgins, 2005). Therefore, most Spanish for Healthcare courses have a mixed bag of students. Most of them have a basis in Spanish but are not well-versed in medical settings and some of them are familiar with the medical context but lack proficiency in Spanish. According to Bernal de Pheils and Saul (2009), a lack of resources can often force programs to consider only students with intermediate to advanced Spanish proficiency which can exclude students entering the medical field. Finally, healthcare students might be attracted to a Spanish for Healthcare course, but unless it is required, the course will often conflict with the students' schedules (Altstaedter, 2017). This is often in part to the lack of collaboration among departments in universities and institutions, a pervasive issue in any LSP course.

Furthermore, just as research is needed on LSP in languages other than English, literature on Spanish for Healthcare courses is also lacking (Sánchez-López et al., 2017). In an overview of medical Spanish curricula in the U.S. over the last twenty-five years, Hardin (2015) reviewed the literature on thirty-five documented Spanish for Healthcare courses. In this review, Hardin found that the most pressing needs for Spanish for Healthcare courses were a more unified research base and evidence-based course design, a critique applied to LSP in general as well. Another critique is that programs and language departments hosting Spanish for Healthcare courses need to reach out to individuals and institutions that can both offer support and collaborate in educational endeavors (Sánchez-López, 2010). These critiques allude to the need for a more systematic and unified framework for both designing and implementing Spanish for Healthcare courses. Since a major challenge in previous courses has been fulfilling the goals of a diverse classroom, this framework would need to include a way of determining the most pressing needs of individual students. The current study proposes the Task-Based Language Teaching (TBLT) pedagogy and the task-based NA as promising solutions for the pervasive challenges in the implementation of Spanish for Healthcare courses and the field of LSP in general.

Task-Based Language Teaching (TBLT)

Task-based language teaching (TBLT) is often considered a research-based pedagogy, meaning that the approach to language teaching strives to be congruent with the most recent second language acquisition (SLA) findings. In the last few decades, TBLT has matured from being a teaching approach that references SLA theories to an empirically sound research program (Robinson, 2011). In recent years, there has been a growing interest in TBLT demonstrated by the creation of conferences, publications, etc. dedicated to the approach (Van

den Branden et al., 2009; Shehadeh, 2018). The following section will address major definitions, theoretical perspectives, and practical implications of TBLT.

Definitions

Task

The primary unit of analysis in any true TBLT course is the task. Despite its centrality in the approach, there has been much ambiguity and controversy regarding a generally accepted definition. In the search for a precise yet concise definition of ‘task,’ there have been many proposals. In fact, Van den Branden (2006) mentions more than fifteen definitions. Even more challenging is that each of these definitions can be quite distinct from one another. Perhaps one reason that all these definitions are so divergent is because they accentuate different aspects of what ‘task’ is (Samuda & Bygate, 2009). Some of the earliest and oft-cited definitions of tasks are as follows:

A piece of work undertaken for oneself or for others, freely or for some reward.

Thus, examples of tasks are painting a fence, dressing a child. ‘Tasks’ are the things people will tell you they do if you ask them and they are not applied linguists (Long, 1985, p. 89)

An activity which required learners to arrive at an outcome from given information through some process of thought and which allowed teachers to control and regulate that process (Prabhu, 1987, p. 24)

An activity in which: meaning is primary; there is some communication problem to solve; there is some sort of relationship to comparable real-world activities;

task completion has some priority; the assessment of the task in terms of outcome (Skehan, 1998, p. 95)

One of a set of differentiated, sequenceable, problem-posing activities involving learners and teachers in some joint selection from a range of varied cognitive and communicative procedures applied to existing and new knowledge in the collective exploration and pursuance of foreseen or emergent goals within a social milieu (Candlin, 1987, p.10).

Each of these early definitions highlights a crucial element of a task. For example, Long (1985) speaks to the real-world connection evident in a task while Prabhu (1987) underscores that a task has a defined outcome. Skehan (1998) insists that meaning is primary in a task whereas Candlin (1987) demonstrates how tasks are co-constructed in the classroom. Each of these aspects or elements are essential to understanding what constitutes a task in TBLT; however, there were several shortcomings present in these early definitions.

For one, their lack of specificity results in some misconceptions about a true TBLT task. Where these early definitions first fail is in their use of the word ‘activity’ which is even more ambiguous than ‘task’ and is often confused with the materials or the process of the task rather than the task itself. The result of this misconception is a slew of activities being characterized as tasks even though they do not meet any of the criteria outlined in early TBLT literature. Second, these early definitions fall short in that they fuse two perspectives of ‘task’ where there needs to be a clear distinction: ‘task-as-a-process’ and ‘task-as-a-work plan’ (Ellis et al., 2020). ‘Task-as-a-workplan’ is the why, what, how, where of a task (Breen, 1987). According to Ellis (2000) a workplan includes input—what information is to be learned and used—and instructions for

achieving a certain outcome. On the other hand, ‘task-as-a-process’ is what happens during the actual task. The workplan is up for reinterpretation by the learner as he or she engages with the task (Breen, 1987). While both versions of a task are essential to its definition, ‘task-as-a-workplan’ is initially superior when it comes to defining ‘task’ as it is more reliable and contains quantifiable information (Ellis et al., 2020).

Another option for defining tasks is to think in terms of what a task must be rather than what it could be (Samuda & Bygate, 2009). Most proponents of TBLT agree that ‘task-as-a-workplan’ must incorporate the following criteria: meaning is primary; there is an achievable goal; there is a defined outcome; and there is a connection with the real-world (Skehan, 1998, p. 268). More recent examples add to this initial list of basic criteria. For example, Ellis (2003) adds that a task can involve any of the four language skills, and a task engages cognitive processes. Ellis and Shintani (2013) add that learners rely on their own resources rather than an explicit presentation of language and there is a definite outcome that is used to assess task success rather than accurate language use. Despite the various contributions, the difference between ‘task as a workplan’ and an activity or exercise is that it meets the four basic criteria mentioned previously by Skehan (1998).

Yet another option in defining ‘task’ is by classifying, or grouping, tasks based on similar features. One early attempt at classifying tasks was Prabhu (1987)’s typology of tasks: the information gap task, the reasoning gap task, and the opinion gap task. An information gap task involves one learner transferring key items of information that another learner needs to complete the task. A common example of an information-gap task is a ‘spot the difference’ task where learners are given similar but slightly different pictures and required to work collaboratively to conclude the differences. A reasoning gap task, like the previous type of task, requires both

comprehension and transfer of information; however, the reasoning gap task, sometimes referred to as a decision-making task, additionally requires a learner to create new information through deduction or inference. Finally, an opinion gap task expects learners to reflect on given information, provide an opinion, and discuss their opinion with other learners. At the end of the task, the learner is often required to offer justification for his or her opinion based on facts.

There are a variety of other typologies to classify and define tasks (Ellis et al., 2020) and many proposed definitions. However, even the most recent definitions of ‘task’ are not without their critics. For example, Long (2015) has characterized many of the more recent definitions of task as too “abstract” and “opaque” (p. 109). Early proponents of the field questioned whether a task can be defined or even should be generally defined (Candlin, 1987). However, many scholars agree that an unanimously acknowledged definition of task is an urgent and validated need (Van den Branden, 2006; Ellis et al., 2020; Ellis, 2000). One reason that the approach needs to define ‘task’ is to effectively research and use tasks in the classroom (Samuda and Bygate, 2009). Still, perhaps the most important reason for a clear definition of task is the fact that task is the central unit of analysis in any TBLT course. From the design of a TBLT course to its assessment, tasks are the focal point. As a result, defining ‘task’ becomes essential in understanding, researching, and implementing TBLT.

Task-Based Language Teaching (TBLT)

Task-Based Language Teaching (TBLT), like many other modern second language acquisition (SLA) approaches to language teaching, finds roots in the movement away from the traditional approaches to learning languages that dominated the field of SLA in the 1950s and 60s. These behaviorist-inspired approaches were teacher-dominated, form-focused, and taught language as a system of discrete units that were learned sequentially (Van den Branden et al.,

2009). Due to a growing skepticism of these approaches to language teaching and learning as well as an influx of linguistic research on functional language use, more communicative language methods emerged, most notably Communicative Language Teaching (CLT), a forerunner of TBLT. A task-based approach to language teaching was appealing during this new wave of communicative language teaching approaches. For one, the use of negotiated tasks could dismantle the teacher-dominated or teacher-centered culture in the traditional classroom and increase self-confidence of the learner (Candlin, 1987; Breen, 1987). Also, tasks also proved to be a feasible unit by which to structure a course or a syllabus (Nunan, 1988). Finally, task-based approaches were a potential solution to the SLA findings that rejected a structural or synthetic syllabus (Prabhu, 1987). However, it wasn't until the 1980s that TBLT officially came onto the scene with publications such as Prabhu (1987) and Long (1985). TBLT was a natural progression from CLT in its primary focus on meaning as well as learner-centeredness, but it differed in several ways, the most important distinction being TBLT's stance on focus on forms. Unlike CLT, TBLT acknowledged the benefits of explicit instruction (Long & Crookes, 1992; Long, 1991) and adopted a 'focus on form' approach.

Despite the strong rationale for TBLT bolstered by SLA research findings, there were several issues that arose with early TBLT publications such as the aforementioned ambiguity in defining 'task' and the uncertainty in how to design tasks for the classroom. Due to this ambiguity, TBLT was nearly instantaneously conflated with other types of approaches that rely on tasks but are not true TBLT approaches. Perhaps it is beneficial here to distinguish TBLT from these other similar but distinctive approaches. There are clear differences between task-supported, task-referenced, and TBLT's task-based approach (Samuda and Bygate, 2009). A task-supported approach to language teaching makes use of tasks but tasks are not the principal

aspect of either the syllabus, instruction, or evaluation. Task-referenced approaches employ tasks to set goals, but not only tasks are used in the process of reaching these goals. Finally, true task-based approaches center the syllabus, instruction, assessment, etc. on the task itself. It is this latter approach that TBLT adopts, centering the entire course on the task.

Major Theories

TBLT is informed by several different SLA theories and perspectives. Each of these perspectives—cognitive-interactionist, psycholinguistic, sociocultural, and educational—pivot on their views of language and how language is acquired. Despite the differences in these perspectives, each of them contributes to and influences TBLT in a significant way. For this reason, it is vital to adopt a holistic view when reconstructing the theoretical basis for TBLT and understanding how TBLT is truly a research-based pedagogy.

Cognitive-Interactionist Perspective

The primary foundation for TBLT is undoubtedly the cognitive-interactionist approach (Long, 2015; Ellis et al., 2020; Ellis, 2003). The approach stems from its views on the role of cognition and interaction in the language acquisition process. The Interaction Hypothesis (IH) lies at the heart of this approach in explaining the relationship between interaction and cognition, namely that interaction triggers the necessary cognitive processes, such as the processing of input and output, for language acquisition (Long, 1996). Attention and implicit learning are both central to the cognitive-interactionist approach and TBLT (Ellis, 2003; Ellis et al., 2020). Attention is vital to language acquisition from the cognitive-interactionist perspective. According to Schmidt (1990) there are two levels of attention: ‘noticing’ and ‘understanding;’ however, in a later publication Schmidt (2001) admits that attention is, in fact, a plethora of

mechanisms such as alertness, detection, and orientation. Attention, and all of its subforms, is responsible for processing input which, ultimately, promotes language acquisition. The resources available for attention, however, are limited, and various aspects of performance vie for these resources (Skehan & Foster, 2001). There is, then, tension between meaning and form as the language learner chooses one at the other's expense.

As for the role of implicit learning, one of the findings generally agreed upon by SLA scholars and researchers is that incidental learning is largely successful in the case of young language learners while the same type of learning is for the most part unsuccessful in adults (Long, 1990, 2015). This supports the well-founded understanding that adults are subject to age constraints during the process of learning a language. Therefore, adult L2 learners must rely on explicit learning as well as implicit learning to promote language acquisition. According to the cognitive interactionist model, implicit learning can occur when learners learn without noticing; however adult L2 learners can compensate for reduced capacity for implicit learning through explicit learning which can activate implicit knowledge (Ellis et al., 2020). TBLT promotes explicitly drawing the learner's attention to form, but in a way that recognizes that implicit learning is the most effective way to learn (Long, 2015).

TBLT advocates a 'focus on form' approach (Long, 1991) that straddles the line between implicit and explicit learning in that the primary focus is meaning while, at the same time, attention is explicitly drawn to certain target forms. 'Focus on form' is in direct opposition to a 'focus on forms' which isolates linguistic structures and elements and teaches them to learners one at a time. Research has shown that learners simply do not learn in a linear fashion, but rather, through a system known as interlanguage (Selinker, 1972). According to interlanguage theory, the target form begins as an utterance that is completely non-native-like and becomes

increasingly more native-like as the learner continues to practice the form over time (Long, 1991). Despite the research against a complete focus on forms approach, focusing on language as an object should not be completely abandoned as there are some advantages such as faster rates of learning and longer retention of the form (Long, 1983). Therefore, the focus on form approach taken in TBLT acknowledges the advantages of both implicit and explicit learning in the acquisition of language, especially for adults.

Interaction has a just as essential role as cognitive processes in the cognitive-interactionist theory. For one, input is made comprehensible through interaction. Interaction is usually between a native speaker (NS) and a non-native speaker (NNS) or two non-native speakers (NNS-NNS). In the case of a NS-NNS interaction, the NS will provide either negative or positive evidence about the target language (Long, 1996). Positive evidence is when the native speaker offers language that is generally accepted as correct and grammatical while negative evidence involves the native speaker supplying information about what utterances are not grammatical or correct. Negative evidence, also known as feedback, is either explicit or implicit. The purpose of these modifications is to either avoid communication breakdown or repair communication breakdown. Besides making input comprehensible, the interaction between two or more persons creates opportunities for the learner to process input, feedback, and output, especially through negotiation of meaning (Gass et al., 1998: Pica, et al., 1987). These instances of negotiation of meaning are the most common when communication breaks down, and speakers are pushed to resolve the problem through discourse repair. Long (1996) mentions a variety of strategies and tactics that NSs use for modification such as selecting a topic that is relevant and familiar, repeating utterances, or asking for clarification. However, negotiation of meaning is not only possible in conversations between native and non-native speakers. In fact,

NNS-NNS conversations could be even more conducive to negotiation of meaning (Varonis & Gass, 1985). There are a variety of indicators at a learner's disposal such as repetition, clarification request, confirmation check, comprehension check, etc. (Lyster & Ranta, 1997). It is here, during negotiation of meaning, that focus on form comes into play by drawing the learner's attention to the specific target form or meaning during communication breakdown (Long, 2015).

Cognitive-interactionist research is extensive and has been applied in a variety of ways. Initially research has focused on what factors influence interaction, both the learner and the task at hand (Gass et al., 1998). Interaction research has consisted of task-based learner performance studies, which are concerned with task design and implementation variables, and task-as-treatment studies which are more concerned with the role of noticing (Ellis et al., 2020). There are a couple of limitations evident in research from the cognitive-interactionist perspective. One is that the research paints quite a simplified view of interaction and its role in acquisition. Interaction is quite complex and not limited to its role in connecting input and output. Second, the research is primarily centered on immediate effects of tasks. There is a great need for cognitive-interactionist research to conduct longitudinal studies on tasks.

Psycholinguistic Perspective

TBLT also has roots in the psycholinguistic approach to SLA which connects the cognitive processes to underlying psycholinguistic processes. A psycholinguistic perspective on TBLT is interested specifically in task performance and what aspects of a task impact that performance. The psycholinguistic perspective is interested in both memory and how knowledge about the second language is represented in the mind. There are two memory systems at work: the 'short-term memory system,' or working memory, and the 'long-term memory system'. The "short-term memory system is considered to be limited in capacity and require conscious effort

and control” whereas the long-term memory has more potential capacity and does not necessarily require consciousness (Skehan, 1998, p. 44). Memory becomes relevant to language use when it comes to noticing and processing information, or input. This process is split into three stages: input, central processing, and output. ‘Noticing’ (Schmidt, 1990) filters input into either the working memory system or the long-term memory system which supports the production of language known as output (Skehan, 1998).

During the central processing stage, representation of language knowledge becomes exceedingly vital. According to Skehan (1998), there are two types of systems to represent language: the exemplar-based system and the rule-based system. In an exemplar-based system language is learned by comparing chunks of input with utterances known to be correct; conversely, in a rule-based system, language is learned by generalizing fundamental rules to specific instances of language. Though seemingly contradictory, the two systems work in concert: the first system holds readily available information used to produce fluent language use whereas the latter contains information that is more difficult to access and, thus, for more controlled language use. These systems are reminiscent of implicit and explicit learning and initiate a conversation about a relationship between the two. While there is still much research to be done in this area, TBLT takes the stance that implicit learning is superior; however, explicit learning is often necessary when it comes to SLA for adults (Long, 2015).

The final stage in processing information is language production. According to the cognitive approach, there are three elements of language production: fluency, accuracy, and complexity (CAF) (Housen & Kuiken, 2009). However, later research contributions make a distinction between lexical and structural complexity and examine them separately in a framework known as CALF (Skehan, 2009). According to Skehan’s ‘model of Limited

Attentional Capacity (LAC)' (Skehan, 1998), each of these performance areas require the learner's attention; therefore all four of the areas must compete for the learner's limited attention capacity (LAC). The assumption is that if a learner is engaging in a task and is reaching the attentional limit, the learner will make a compromise, concentrating on one area of performance and letting another area fall to the wayside (Skehan & Foster, 2012). Another cognitive model is Robinson's 'Cognition Hypothesis (CH)' (Robinson, 2011). According to the CH, there are limits to working memory but not for attentional resources. Robinson suggests that there are 'resource pools' of attention that a learner can draw upon to use for different demands as long as those demands do not require the same attentional resources.

Research on tasks in relation to these models and representational systems has looked at both the influence of task variables on task performance and task complexity (Ellis, 2009). Skehan (1998)'s model has contributed mostly to research on how various characteristics of a task impact actual performance. For example, Skehan (1998) places a priority on pre-task planning as such planning can "free-up on-line processing resources while a task is subsequently completed" (p. 73-74). Ellis (2009) offers a summary of research on task dimensions that are predicted to create the most opportunities for negotiation of meaning, a key part of focus on form. According to these findings, a task that requires an exchange of information, involves two-way communication, and has a closed outcome, among other dimensions, is advantageous to negotiation of meaning. This information is crucial in psycholinguistic research; however, there need to be further studies conducted on how task dimensions interact with one another.

Research utilizing Robinson (2001)'s model seeks to discover the complexity of tasks and how that complexity impacts cognitive resources. Robinson provides a framework for task complexity, task difficulty, and task condition. Task complexity is based on cognitive factors and

impacted by either resource-directing or resource-depleting variables. The CH model has been used in task-based research on task sequencing through the 'SSARC model' (Robinson, 2010). The SSARC model is an expansion of the CH into the context of the classroom. The model is expressed in a series of equations that suggest a sequence for tasks: stabilize, simplify (SS); automatize (A); restructure, complexify (RC) (p. 94). These stages replicate the idea that more complex tasks create more opportunities for negotiation of meaning and noticing, both of which are conducive to language acquisition. However, there is yet to be a sole measure of task performance to determine a task's complexity since there is a combination of factors that require a learner's attention simultaneously (Skehan & Foster, 2012).

Sociocultural Perspective

Like the previous two perspectives, most language approaches in opposition to behaviorism revolved around cognitive views of language acquisition. Sociocultural theory (SCT) also arose out of the movement away from behaviorist approaches to language acquisition; however, it centered on the social aspects of learning a language, viewing language learning as a social activity rather than just a series of cognitive processes. From the broad range of theories in socioculturalism, it was the Vygotskian sociocultural theory that has had the most impact on SLA (Vygotsky, 1978). According to Vygotsky's SCT, language is a tool of mediation, meaning that L2 acquisition is a process of transforming the L2 into a tool for self-regulation and thinking (Ortega, 2015). Although many proponents of TBLT have dismissed the influence of sociocultural theories on the task-based approach (Long, 2015), there is an undeniable link between SCT and TBLT when it comes to the role of interaction in learning, the implementation of tasks, and assessment using tasks (Ellis et al., 2020).

Although it can be difficult to explain SCT because of the overlap in its basic concepts, to connect the approach to SLA a brief overview of SCT's view of language is necessary. First, SCT believes that learning is mediated, meaning that learning takes place only when learners interact with cultural artifacts (Ellis et al., 2020). A learner interacts with a more advanced learner, or expert, to create a 'zone of proximal development (ZPD)' where learning takes place. The learner then goes through a process of regulation in which the information obtained in the ZPD is moving toward internalization. This aspect of interaction and creation of the ZPD is attractive to TBLT in its focus on the role of interaction in language acquisition. TBLT is primarily concerned with what aspects of interaction are necessary to create a ZPD, and, thus, an advantageous opportunity for language learning.

In SCT, interaction is given a broader definition than it is in TBLT in that it considers any interactional behavior that occurs between a learner and a more advanced learner, or an expert, to be interaction. There are two important crucial concepts to consider when looking at interaction from this perspective: 'scaffolding' and 'languaging.' Scaffolding, in essence, is the effort of one speaker to help another speaker perform a linguistic task that he or she could not otherwise perform individually (Ellis et al., 2020). An example of scaffolding as it relates to TBLT is feedback strategies which have been a point of interest in SLA research (Aljaafreh & Lantolf, 1994). Languaging, on the other hand, is "the process of making meaning and shaping knowledge and experience through language" (Swain, 2006, p. 98). There are many studies that have been conducted on the ways that learners use language, or languaging, to solve problems during tasks. A lot of these studies have been interested in the concept of 'language-related episodes (LREs)' to refer to learners talking about language or attending to their own language use explicitly in solving linguistic problems (Swain, 1998). SCT's broader definition of

interaction has prompted various research studies into what learners do with language and others during tasks to facilitate language learning.

While SCT has little recommendations concerning designing and sequencing tasks, it has quite a lot to offer in the way of task implementation (Ellis et al., 2020). For one, SCT has offered a new perspective of CF in the form of graduated feedback. SCT considers CF to only be successful if it offers the learner the minimal assistance, or scaffolding, necessary in order for the learner to correct the mistake. Therefore, CF needs to gradually progress from the most implicit strategy towards the more explicit forms of feedback. In a more cognitive-based approach, it is implied that every error should receive some sort of feedback from the expert whereas in SCT, CF is a progression that the learner and expert use to reach the ZPD. CF is seen as a way of assisting the learner in his or her overall development and journey toward self-regulation. One could argue that this view of CF is more compatible with TBLT's values of learner-centeredness and participatory democracy than the cognitive approach.

Finally, SCT has also made contributions to the assessment of tasks as well as assessment using tasks. SCT advocates for dynamic assessment which evaluates not only what learners can do by themselves but what they can also do with assistance or scaffolding (Lantolf, 2009). There have been numerous studies on how dynamic assessment and scaffolding can be used in tasks (Lantolf, 2009; Poehner and Lantolf, 2005; Poehner and Infante, 2016). Most proponents of TBLT have agreed that assessment of TBLT courses must be task-based; however, task-based assessment is an area that is lacking and even contradictory when it comes to research and its application to the classroom (Van den Branden, 2006), although the tasks are completed in groups or pairs, many TBLT courses have utilized an independent-style assessment of task performance. SCT's contribution of dynamic assessment to SLA could be the key to more valid

assessments. However, it should be noted that there are still logistic issues tied up with dynamic assessment, making it, now, a less practical option. Nevertheless, more research could reveal a way to implement dynamic assessment more feasibly in the TBLT classroom.

Educational Perspectives

An educational perspective differs from the previously mentioned theories in that those theories depend upon theory and evidence whereas an educational perspective relies more so on educational philosophy. Even though TBLT arose out of these earlier SLA research-based approaches, as TBLT has evolved, it has integrated educational theories into its main principles (Ellis et al., 2020). Early developments in TBLT were concerned with broadening its rationale to include popular educational theories. Today there is still a strong basis in these theories. In fact, Long (2015) devotes an entire chapter to TBLT's philosophical basis in *l'education integrale* and 'learning by doing' as well as the principles of TBLT that they inform. This facet of TBLT makes up what Ellis et al. (2020) calls the 'affective domain' of TBLT which has been under researched and underrepresented in literature to date. A thorough review of perspectives on TBLT would not be complete without addressing the influence of philosophy of education.

Long (2015) refers to nine philosophical principles of TBLT: individual freedom, rationality, emancipation, learner centeredness, egalitarian teacher-student relationships, participatory democracy, and mutual aid and cooperation. Many of these values can be traced back to philosophers such as William Godwin and Leo Tolstoy. These men and others belong to a tradition of educators and schools that strove to create democratic societies that give every individual, regardless of social status, the right to realize his or her own potential through education and knowledge (Suissa, 2006). One principle, *l'education integrale*, was adopted by philosophers and educational theorists alike (Long, 2015).

L'education integrale, loosely translated as “educating the whole person,” is influenced by a plethora of popular thinkers such as Godwin, Faure, Tolstoy, and Kropotkin. *L'education integrale* encompasses principles such as learning by doing, individual freedom, rationality, egalitarian teacher-student relationships, etc. which compose the nine core values of TBLT proposed by Long (2015). Also, TBLT is largely influenced also by educational philosophers such as Dewey and Kolb who proposed that experience directly stimulates learning (Dewey, 1938/1977; Kolb, 1984) in that TBLT depends upon the learner’s engagement with language and the task itself as a means of eliciting implicit learning. Educational perspectives at the time were highly concerned with teacher-student relationships in the classroom, and TBLT considered these concerns in its foundations. For example, Freire (1970) saw learners as having an active role in their education which TBLT values as ‘participatory education’ and learner-centeredness. Another educationalist that TBLT endorses is Bruner and his concept of ‘learning for use’ (Bruner, 1960/1977) as TBLT focuses on functional language and how it is used in the real-world.

These ideas encompassed by *l'education integrale* underlie the nine core principles of TBLT (Long, 2015). First, TBLT takes a moderate position on individual freedom in education by not forcing a pre-established syllabus on learners and, instead, allowing learners’ needs to determine the substance of the course. At the same time, TBLT recognizes the role of the educator as a guide in the individual’s learning process when needed. Second, the value of reason and rationality permeates nearly every aspect of TBLT. As mentioned earlier, TBLT is propelled by evidence-based SLA research and findings that inform its decisions. Also, TBLT has a systematic approach to course design with the needs analysis as the first step in this process. From the results of that systematic research, the materials, activities, and assessment

procedures are selected and discussed with students at the beginning of the course. Third, TBLT recognizes that education has the power of emancipation. TBLT revolves around a socially conscious curriculum and materials, and the students are emboldened to think critically about social issues and arrive at their own conclusions. Fourth, TBLT is inherently learner centered. The content of the course is established by analyzing the learners' needs. Also, there is no pre-set syllabus; rather, the pace of the course is set by the learners' readiness. Fifth, TBLT advocates for egalitarian relationships between students and teachers for the sake of both optimal learning and learning environment. Such relationships ensure that learners feel comfortable enough to negotiate with the teacher and other learners as well as seek help from these individuals when communication breaks down. In a TBLT classroom, the teacher is a reactive guide rather than an authoritarian figure. Sixth, TBLT aims to replicate a participatory democracy in the classroom. For instance, the educator includes the learners when making decisions about the course and their own learning process. Also, the teacher is transparent when it comes to course design and rationale for materials, activities, assessments, etc. Finally, TBLT does not buy into the survival of the fittest mentality but, instead, the idea that mutual aid and cooperation are the norm. The purpose of the course is not for some students to fail and others to succeed but for all students to participate and gain knowledge from the experience.

These nine core values, derived from the educational theories of *l'education integrale*, are an essential part of the rationale for TBLT and its effectiveness as an approach to language teaching. Again, this perspective constitutes what can be referred to as the 'affective domain' of TBLT. While the affective domain of TBLT has received less attention than the theoretical underpinnings of the approach, there is certainly a place for educational perspectives on TBLT in future research. Some starting points might be research on personal investment of learners on

task through task design and task implementation (Ellis et al., 2020). Regardless of where research chooses to proceed, the affective domain of TBLT is a budding area of interest.

Each of these four perspectives—cognitive-interactionist, psycholinguistic, sociocultural, and educational—are helpful in both shaping a rationale and laying a foundation for TBLT. However, these perspectives do not delve into the practicality of designing, implementing, and evaluating a TBLT course. The following section will address each of these steps to illustrate the process of translating TBLT theories to the actual classroom.

Design, Implementation, and Evaluation of A TBLT course

Needs Analysis (NA)

Because learners' reasons for learning a L2 are so diverse, a general, one-size-fits-all curriculum does not help learners meet their needs, nor is it effective in teaching the variety of learners usually present in a language learning classroom (Long, 2015). A needs analysis (NA), also known as a needs assessment, is the process of determining the language needs of individuals to develop a curriculum that best meets those needs. Simply put, a needs analysis is the “what and the how of a course” (Dudley-Evans & St. John, 1998) that determines needs as well as classifies them by their priority (Pratt, 1980), implying that an NA involves not one but a variety of means of analysis. Brown (2009) states that the NA “is the systematic collection and analysis of all information necessary for defining a defensible curriculum” (p. 269). It can also be helpful to define an NA by what an effective NA accomplishes (Juan, 2014). According to Juan, an effective NA must be active in meeting the needs of learners. Second, the NA must aid in organization of materials, teaching methods, and assessments. Finally, the NA must drive teaching to be more target-oriented and efficient. Zrníková (2015) adds another criterion: the NA

must catalyze changes in the course and/or curriculum. The results of a NA are useless if they do not initiate action and improvement.

There are several fields and approaches that employ the NA in research and curriculum development. The general idea of an analysis of needs dates all the way back to the 1920s when Michael West used the term to explain the foreign language skills that learners needed in order to participate in a target situation (Juan, 2014; West, 1994). Nevertheless, it wasn't until proponents of English for Specific Purposes (ESP) began to publish studies utilizing NAs that the term became more widely recognized in the field of SLA (Munby, 1978; Richterich, 1972). The paper at hand specifically homes in on a specific type of NA, the task-based NA (Long, 2005; Oliver et al., 2012). Because of TBLT's basis in philosophies such as learner-centeredness and participatory democracy, the NA is well-suited for the TBLT framework (Long, 2015; Serafini et al., 2015). According to Serafini et al. (2015), the task-based NA "draws on data gathered from multiple sources of information, using multiple methods, to inform course content" (p. 449). More precisely, the task-based NA is "a comprehensive, in-depth inquiry into the kinds of tasks learners need to be able to do, typically outside the classroom, as well as the language associated with them" (Malicka et al., 2019, p. 79). Despite the immense improvement in the practice of the NA, there are still questions about how to utilize data gathered from an NA when it comes to designing and sequencing tasks in a syllabus.

Selecting and Sequencing Tasks

Once tasks are defined and classified, there is the question of how they are selected for and sequenced in the design of a TBLT curriculum. The selection of tasks, however, relies upon which approach to syllabus design is being utilized. For example, Ellis et al. (2020) references three different approaches to syllabus design—Prabhu (1987), Long (2015), and Robinson

2011)—as well as introducing his own take on designing a task-based syllabus. Briefly, Prabhu’s syllabus design selects tasks based on what will most likely interest the learners since they will then put forth more effort. Long’s syllabus selects tasks based on the results of a needs analysis (NA) which will be expounded upon later in this section. Robinson, on the other hand, opts to select tasks based not only on the results of an NA, but also an information-theoretic analysis and an ability analysis. Finally, Ellis (2018) agrees that tasks should be selected based on a NA, when possible, but in other cases, Prabhu’s selection of tasks should be employed. It can safely be argued that each of these options are viable; however, Long (2015)’s syllabus design is the strongest option for most contexts due to the NA’s accountability and validity awarded by its robust research base.

In review, a NA is the process of determining the language needs of individuals to develop a curriculum that best meets those needs. It is crucial that tasks selected for a TBLT course are linked to the target tasks determined by the needs analysis (Long, 1985). Once target tasks are created, they are used to create type tasks which are then broken down into pedagogic tasks (Van Avermaet & Gysen, 2006). According to Long (2015), a syllabus is made up of a “sequence of pedagogic tasks” (p. 223). Long gives an example of how pedagogic tasks are selected for a syllabus in a study where a NA is conducted on airline flight attendants. The results derive several target tasks, one of which is to serve breakfast, lunch, snacks, and dinner to passengers. This target task could be classified as serving food and beverages which could then be derived into a pedagogic task, identifying choices between two food items, etc.

There are a couple of warnings to heed when selecting tasks for a course. First, tasks must be selected based on topics or themes that are relevant to the learner (Estaire & Zanon, 1994); however, it can be risky for language experts or educators to be the ones to decide what

topics are the most relevant (Ellis et al., 2020). To avoid imposing tasks on learners that are assumed to be relevant, it is important to conduct a reliable and effective NA beforehand. Yet another issue that can arise when selecting tasks is that two very different tasks can be thrown into the same category. Van Avermaet and Gysen (2006), raise the argument that two tasks in the same category may not necessarily require the same language use or task performance. For example, shopping for groceries is not the same as shopping for clothing at a clothing store even if they both fall under the category, 'shopping.' There are, therefore, two key points to keep in mind when selecting tasks: conduct a valid and reliable NA to ensure tasks are relevant and be wary of grouping tasks together that require very different uses of language.

Once tasks, or pedagogic tasks, are selected for the syllabus, there comes the need to sequence them for the course. It could be argued that a task-based course should not be sequenced prior to a course since all learners do not follow the same order of acquisition or start at the same place (Candlin, 1987). However, this argument assumes that tasks are designed according to linguistic features, which they are not. Also, in all practicality, there must be forethought put into a task-based syllabus since the learners cannot be expected to design their own course. Most researchers agree that tasks need to be sequenced according to some sort of criterion (Skehan, 1996); however, there is little agreement about which criterion to use or, at least, the nomenclature for the criterion themselves. For example, Skehan suggests sequencing tasks based on attentional resources which Prabhu (1987) refers to as mental procedures. Other researchers have offered a litany of parameters too lengthy to list here (Candlin, 1987; Ellis, 2018). A commonality between most of these criteria is that they roughly deal with the complexity of the task.

Again, Long (2015) proposes a thorough yet concise method for sequencing tasks that is both easy to follow and rational. Long advocates for grading, or sequencing, tasks by two criteria: frequency and criticality. Frequency here refers not to the frequency of words or grammar structures, but the frequency of pedagogic tasks. The frequency of tasks is determined by the NA, usually by examining corpora or through observation. The rationale behind using frequency as a criterion for sequencing tasks is self-explanatory: if frequent tasks are more likely to be encountered by the learner, they should take precedence in a course designed to reach the needs of the learner. Criticality, or valency, should also not be in reference to actual forms or structures but to the tasks themselves. Returning to the previous example task, ‘telling passengers to buckle up’ is a critical task for an airline flight attendant. A syllabus that skipped this task or put it off until the end of the course would be doing a disservice to the learner since errors on this task could result in severe repercussions.

Both selecting and sequencing tasks are essential and foundational steps to creating an effective task-based syllabus. For reasons such as validity, accountability and applicability, Long (2015)’s suggestions for both sequencing and selecting tasks are preferable in most contexts. Of course, there are situations in which a NA is not an option, or a syllabus must be designed very quickly or at short notice. In these cases, a return to Prabhu (1987) and Ellis (2018)’s recommendations are viable options. If, however, a NA is accessible to a syllabus designer, it can be exceedingly useful in deriving pedagogic tasks and determining their frequency and criticality.

Evaluating Tasks: Task-Based Assessment

The evaluation of tasks for a course is a natural progression from deriving, selecting, and then sequencing those pedagogic tasks. Early proposals for TBLT gave numerous ways to go

about evaluating tasks. For example, Long (1985) emphasizes the idea that the success of a task is determined by completion of the task rather than target-like production of language. Nunan (1989) offers a checklist about the design, execution, and learner's engagement of a task. Finally, Candlin (1987) gave a broad overview of crucial aspects of a task that need to be considered in task evaluation: ability to be evaluated, ease of classroom application, and relevance to previous and future tasks (Ellis et al., 2020). There are a variety of types of tests and evaluation measures; however, task-based assessments and evaluations are the focus of many proponents of TBLT (Ellis et al., 2020; Long, 2015).

When beginning to consider tests and assessments, it is vital to understand the goal, or the intended use of the assessment (Norris, 2016). A task-based assessment is concerned with the primary goal of TBLT: “to equip students with the abilities they need for successful completion of their target tasks” (Long, 2015, p. 330). An achievement test is used to ascertain if the test-taker has learned the objectives of the course, which in the case of TBLT, is the ability to do the target task in the L2. Task-based assessment, then, is concerned with these target tasks rather than language itself. More specifically, task-based assessment is concerned with the test-takers ability to perform the target task or tasks, which is an important distinction that will be expounded upon later in this section. Long (2015) refers to the assessments as ‘task-based performance tests.’

Not only are task-based assessments based on task performance, but they are also criterion-referenced (Long, 2015; Ellis et al., 2020). This characteristic relates to how results of the evaluation are compared. As opposed to norm-referenced tests which compare the scores of individuals, task-based evaluation compares an individual's task performance against a fixed standard. Since TBLT is concerned with connecting the course goals and outcomes to the real

world, a criterion-referenced approach is ideal and sensible. As with any criterion-referenced style of assessment, an overwhelming concern is defining the criteria by which to evaluate task performance. While there are many approaches to this issue, Brindley (1994) suggests using data-based assessment criteria which are derived from comparing data from target language use situations. In a similar vein, Long (2015) notes that domain experts are responsible for determining the assessment criteria because they are the ones who can determine success on a target task. Once criteria are determined, the individual's task performance is compared to whatever the domain experts consider to be successful performance to make judgments about individual task performance.

To better understand how tasks can be used as a valid proposal for second language testing, it is helpful here to refer to a well-known model proposed by Skehan and Foster (2001). At the center of this model is, naturally, the task which is responsible for actually eliciting task performance. On one side of the task are underlying competences and ability for use which relate directly to the test-taker, and on the other side, are raters/rating scales and score which are both indications of the observations about the task performance. Ellis et al. (2020) adds valuable commentary on the model and the processes behind it. The test-taker has underlying competences which directly impact performance; however, it is 'ability for use' that is necessary for the test-taker to transform these competences into actual language use. Therefore, the underlying competencies are useless unless the test-taker can use them in real-world communication.

This model, as well as task-based assessment in general, is prone to criticism. The primary issue with the model is the lack of research on how each of its components influences task performance and, therefore, the score on the assessment itself (Ellis et al., 2020). For

example, task conditions, different raters, and different standards can all either negatively or positively affect task performance. While research on tasks has brought much more understanding about how task conditions, etc., can impact task performance, there is still much research to be done in this area. However, this is not a problem unique to task-based testing but to testing and assessment procedures in general. In fact, most critiques on testing approaches can be boiled down to issues of validity, reliability, and practicality (Ellis et al., 2020; Brindley, 1994). According to Brindley, the criticisms toward task-based assessment has not caused interest in and support of this type of assessment among both teachers and learners; however, there are a few challenges that are important to address in order to improve upon a task-based approach to evaluating language performance.

In its study on implementing task-based assessment in a foreign language education context, Norris et al. (2002) lists several shortcomings of task-based assessment such as the inability to extend its interpretations about task performance beyond a specific task or context. According to Long (2015), the transference of performance on tasks to the real world is an overwhelming issue in not only TBLT but also most other approaches to testing and assessment. However, TBLT at least tries to connect its testing measures to real-life whereas synthetic approaches do not attempt to make a connection at all. Another aspect of transferability is the transfer of task performance from one task to another. If task performance was transferable across tasks, then task performance could be predicted on future tasks. Unfortunately, there are two tremendous challenges to predicting task performance (Bachman, 2002). For one, there is not a generally accepted method for characterizing and classifying tasks. Second, tasks are not neutral, but interact with individuals differently; therefore, it is impossible to assume that one task will yield the same performance between two different individuals. This phenomenon

relates to the idea of ‘co-construction’ where learners interact to perform a task. However, co-construction is very difficult to implement in testing situations without directly influencing task performance in one way or another (Ellis et al., 2020).

In conclusion, despite the plethora of criticisms of task-based assessment, the approach to language testing is not any more disputed than many other approaches to testing. There are, however, ways in which task-based assessment can improve upon validity, reliability, practicality. For example, Brindley (1994) offers several general solutions to issues in task-based assessment according to these three areas. For validity, task-based assessment can continue to refine task performance criteria that are consistent with current SLA research findings. In terms of reliability, task-based evaluation can try to create a consistent way to apply task performance criteria. Finally, to promote practicality, task-based assessment can better inform learners about the criteria by which they are being assessed. Following these suggestions, along with conducting more task-based research, can accumulate both the funds and the support necessary to advance task-based assessment.

A Case for a Task-Based Approach

Because of the difficulty in defining ‘task,’ several other supposedly task-based approaches have been incorrectly linked with TBLT. In order to build a case for a true task-based approach, it is beneficial to return briefly to the distinctions between task-supported, task-referenced, and task-based approaches mentioned previously. A task-supported approach and a task-referenced approach use tasks in various aspects of a course, whereas a task-based approach centers the entire course—syllabus, instruction, evaluation—on tasks. Task-referenced approaches employ tasks to set goals, but not only tasks are used in the process of reaching these goals. Finally, task-based approaches center the syllabus, instruction, assessment, etc. on the task

itself. While it can be tempting for teachers to embrace a task-supported or task-referenced approach, there are a variety of reasons why a task-based approach like TBLT is superior when it comes to practical classroom implementation. First, the centrality of the task as the sole unit of analysis in a course is useful. One reason is that tasks make a NA more valid and easier to conduct (Long, 2005). Many sources for an NA, such as job descriptions, are already organized in terms of tasks. Also, tasks provide a context for syllabus items whereas non-task-based NAs yield items that are simply linguistic. Finally, tasks give experts in the target situation and language experts a common language to discuss and think about needs. Not only are tasks useful in conducting NAs, but they are also effective units of organization in a syllabus. Tasks can merge other units of organization—vocabulary, grammar, topics, etc.—since these aspects are met and evaluated in the completion of a task (Lambert, 2010). Also, tasks are directed towards the outcome of communication, giving learners the opportunity to create new language and learn according to their own internal preference (Robinson, 1995).

In sum, Long (2015) offers the most comprehensive rationale for TBLT to date. According to Long, TBLT is superior because it is consistent with current and evolving SLA research. TBLT also grants accountability as a valid language approach that is deserving of the increasingly limited resources and funds that education has available. Furthermore, TBLT's use of the NA makes it relevant in a time when second and foreign language instruction is viewed as auxiliary to the instruction of math and sciences. TBLT is also designed to circumvent previous flaws of existing language teaching approaches. TBLT also supports learner-centeredness which is seen as paramount in current research on language teaching. Finally, TBLT is functional, especially for adults, in that it addresses the practical needs of language learners. TBLT has always been motivated by the idea that learners are not all wanting to learn the same things. Only

true task-based approaches like TBLT recognize the need to create individualized courses that aim for the goals of individual learners (Van Avermaet & Gysen, 2006).

Today TBLT is globally considered a viable option for promoting second language acquisition for both adults and children (Van den Branden, 2006). There is, in fact, substantial evidence that tasks may be the key to unlocking second language acquisition success. There have been many developments in TBLT over the years. Namely, that TBLT has evolved from being a teaching approach loosely backed by second language acquisition theory to an empirically based research program (Robinson, 2011). Ultimately, since TBLT is always evolving with the ongoing developments in SLA, it is always a work in progress (Long, 2015). TBLT, however, pairs well with other approaches to teaching such as LSP.

Intersection with LSP

The current study opts for a merging of the strong research foundation and pedagogy practices of TBLT with the domain-specificity of LSP. There are, as mentioned in the previous chapter, many overlapping concepts shared by both TBLT and LSP which have been recognized by researchers and theorists alike. In fact, Torres and Serafini (2015) assert that TBLT is one of the most promising theoretical frameworks for LSP for a number of reasons. First, TBLT is shown to be effective in developing Spanish language proficiency (González-Lloret & Nielson, 2015). Also, tasks are an effective way for individuals who are not well-versed in language theory or pedagogy practices to describe their day-to-day activities (Long, 2015). Finally, TBLT meets LSP's immediate need for a unified research base and stronger empirical evidence (Hardin, 2015). For these reasons, a task-based NA ensures both validity and accountability when informing an LSP-style course.

Task-Based Needs Analysis

Introduction

A needs analysis (NA) is essentially the process of determining the individual language needs of learners in order to inform the design of a curriculum to meet those needs. One of the most popular definitions of the NA is by Brown (1995): “the systematic collection and analysis of all subjective and objective information necessary to define and validate defensible curriculum purposes that satisfy the language learning requirements of students within the context of particular institutions that influence the learning and teaching situation” (p. 36). The general idea of the NA has been around since the 1920s (Juan, 2014; West, 1994); however, it wasn’t until proponents of ESP began to publish studies utilizing NAs that the term became more widely recognized in the field of SLA (Munby, 1978; Richterich, 1972). The task-based NA derives from the language learning approach of TBLT and is the first step in creating a task-based course (Long, 2005). The task-based NA differs from a general NA in that it uses ‘task’ as the unit of analysis, determining specific tasks that the target domain and its learners need to be able to perform in the target language (Gilabert & Malicka, 2021). Although the number of studies that address how to conduct a task-based NA is accumulating (e.g., Berwick, 1989; Brown, 2009, 2016; Long, 2005, 2015; Serafini et al., 2015), a meta-analysis study by Bryfonski and McKay (2019) found that out of over fifty studies implementing TBLT only four of them conducted a NA.

There is a lot of improvement needed in task-based NA implementation and reporting (Serafini, 2022). Serafini et. al. (2015) cites several prevalent issues such as the failure to describe sampling measures, the absence of pilot studies on data collection materials, and the

disregard for effective sequencing of mixed methods designs (from open to closed procedures). Another common mistake is to not use a variety of sources and methods or triangulation of those sources and methods (Long, 2005). Furthermore, of the studies that did use a form of triangulation (methods *or* sources), only around 40% of task-based NAs used the ‘gold standard’ of source x method interaction (Serafini, 2022). Methodological reporting is another concern with a significant number of past NA studies only presenting their findings (Long, 2005; Serafini et al., 2015). Finally, task-based NAs of the past have often stopped at determining needs, avoiding the translation of those needs into tasks (Gilbert & Malicka, 2021). An exception is the more recent task-based NA of Malicka et al., (2019) which demonstrates how to apply the findings to the actual classroom. The task-based NA of the present study attempts to circumvent as many of the pitfalls of previous NAs as possible while emulating the methodological decisions of recent successful task-based NAs and implementing methodological decisions put forth by proponents of TBLT.

Methodological Considerations

Although NAs have been around a long time, there are relatively few systematic reviews of NA methodology to date (an exception by Serafini et al., 2015). Researchers will agree that conducting a proper, effective, reliable, and valid NA takes sufficient time and attention to detail. Furthermore, because needs are transient and ever-changing, results of an NA will never be completely conclusive (Lambert, 2010), making the methodology of an NA extremely important. There is not a single and most effective way to conduct a NA; therefore, it is important to be aware of the available options and avoid committing errors of previous researchers by

considering previous NAs (Long, 2005). The following observations are brief and general considerations regarding how to conduct a NA.

Two important aspects of NA methodology are sources and methods. Sources are usually categorized by their proximity to the target area. Insiders such as an employer or an employee in a workplace setting are a fixed part of the target situation and are “the most likely to provide accurate, reliable, and objective information about essential target tasks” (Serafini, 2022, p. 78). Outsiders such as language experts and educators are further removed from the target domain; however, their expertise is helpful when analyzing discourse (Long, 2015) or translating NA results to language tasks. It is crucial to have a variety of sources and include both insiders and outsiders (Serafini, 2022). A common mistake is to rely solely on the perceived needs of the learners in conducting a NA. Although the learner has priority in that they are the ones that will be directly affected by the course (Long, 2005), there is much research indicating that using only learners as sources results in an inadequate NA (Chambers, 1980). Another crucial aspect regarding sources is how to gather participants. It is strongly suggested that researchers make use of stratified random sampling which advocates for the division of a larger population of potential participants into smaller groups based on commonalities (Long, 2005, 2015; Serafini et al., 2015; Serafini, 2022).

It is agreed upon by most researchers that a mixed-methods approach is the most successful when conducting an NA because “qualitative data add depth while quantitative data give breadth and can verify the representativeness of qualitative findings for the wider population” (Serafini, 2022, p. 79). Long (2005) provides an extensive list of possible methods for conducting an NA, the most notable being: researcher or learner intuition; unstructured or structured interviews; surveys and questionnaires; language audits; observations; diaries,

journals, and logs; content, discourse, corpus, and genre analysis, and performance tests. There are obviously pros and cons to each of these methods and certain ones have advantages and disadvantages when it comes to conducting an NA; however, perhaps the most crucial consideration for methods is their sequencing. For example, Long (2005) suggests using open or inductive procedures such as unstructured interviews and observations before closed or deductive procedures such as surveys and questionnaires (Berwick, 1989; Gilabert, 2005). This type of sequence prevents the researcher from imposing their own perceptions on the participants and allows the participants to influence the direction of the NA. It also allows data from the open-ended methods to inform the decisions made in the more closed-ended methods (Serafini, 2022).

Not only should attention be paid to sources and methods, but the NA analyst must also consider triangulation. Long (2005) recommends that a researcher utilizes many methods and sources to increase both the amount of data gathered and the quality of the data. Triangulation of both sources and methods is crucial to developing an effective, reliable, and valid task-based NA. In essence, triangulation is when a researcher compares several sets of data such as sources, methods, theories, or combinations of sources and methods (Jasso-Aguilar, 1999; Long, 2005). It is important to note that triangulation does not mean gathering various duplicate sources or methods; rather, it is the collection of various types of sources or methods. For example, a researcher may triangulate the perceived needs of learners with other types of sources such as educators, domain experts, etc. Furthermore, the same researcher may compare data using a variety of methods such as questionnaires for the learners, interviews with the domain experts, etc. Even if triangulation is not used, the measures taken to prepare for triangulation will inevitably increase the reliability and validity of the NA. If possible, it is recommended to use a

source X method interaction, a process which involves collecting data from multiple sources via multiple methods (Serafini, 2022).

Once the sources and methods have been identified, sequenced and triangulated, there is the question of how exactly one conducts an NA. Brown (2009) sets forth three general steps—get ready, do, and use the NA—for conducting an NA with a list of ten sub steps: define the purpose, delimit the student population, decide upon approach and syllabus, recognize constraints, select data collection procedures, collect data, analyze data, interpret results, determine objectives, and evaluate and report (p. 271-286). Another example of a study that proposes a model for how to conduct a NA is Van Avermaet & Gysen (2006)'s three-step model for a task-based NA. In this model, the researcher first derives a list of target areas. Next, that list is reviewed and verified by stakeholders, experts, and insiders. Finally, the researcher extracts tasks from that list of relevant target domains which are then grouped into general categories called type tasks based on a set of parameters. There are also several suggestions for reporting methodological decisions in a NA. Serafini (2022) suggests that the researcher include specific details about the types of questions used during surveys and questionnaires as well as the interview protocol that was used or at least a sample of questions asked. With accurate reporting, other researchers can easily interpret the NA results and replicate the methodological decisions in future NAs.

The current study will adhere to as many of these methodological suggestions as possible by first employing a mixed methods approach to offer depth and breadth while, at the same time, verifying results are indicative of the larger group of target learners. The study will also recruit a variety of sources, both insiders and outsiders, through stratified random sampling to offer a holistic view of needs. Methods will be sequenced appropriately with more open-ended measures

preceding closed-ended ones (i.e., open-ended questionnaires followed by a closed-ended questionnaire) so that needs can arise organically rather than through the intuition of the researcher. Triangulation of sources and both methods will be used to ensure reliability, and the study will aim for the ‘gold standard’ of source x method interaction. The NA will not stop at determining needs but will translate those needs to specific target tasks and pedagogical tasks, adapting the model by Van Avermaet & Gysen (2006). Finally, the present study will offer a detailed report of its methodology so that others can both interpret the findings of and replicate the methodological decisions made in the NA.

Example Studies

There are several past NA studies that have influenced the study at hand and deserve to be addressed further. First, there have been NAs that have investigated the language needs of healthcare providers. For example, Lear (2006) found in a longitudinal, qualitative study examining five monolingual, English-speaking healthcare providers, that the learners’ needs were not being met due to inadequate materials and resources as well as a lack of emphasis on linguistic strategies in the instruction of the course. Other researchers have come to this same conclusion through studies in different contexts such as (Crawford and Candlin, 2013). Several studies have focused on identifying these specific needs that are not being met. For example, Cameron (1998) investigated the specific language needs of ESL students majoring in nursing related careers, and through his ethnographic observations and interviews with stakeholders, he delineated five categories of needs: (1) Speech Production Accuracy, (2) Academic Performance, (3) Clinical Performance, (4) Dialect (Cultural) Variation, and (5) Inferencing Skills. Many studies have observed that oral skills seem to be the most relevant to current and future

healthcare providers although such skills are given little attention in the traditional classroom (Lepetit & Cichocki, 2002). Another perceived need of healthcare providers has historically been intercultural skills (Lepetit & Cichocki, 2002; Wright et al., 1997).

There are also several studies which have specifically focused on the most effective teaching methods for a Language for Healthcare course. Both TBLT and LSP have been utilized in these studies as pedagogical options. An example of a study opting for TBLT is Kailani and Murtiningsih (2019) which examines the use of a TBLT pedagogy in an English language class for nurses. The in-depth qualitative study looks closely at the students' perceptions of TBLT in the classroom. Findings reveal that students perceived TBLT to be an engaging way to learn a language and that the approach even boosts learners' self-esteem. A mixed-method study by Altstaedter (2017) also considers student and teacher evaluations of teaching methods, but in the context of an LSP course for nursing, dental, and medical students. The study also resulted in positive evaluations of the teaching methods, especially in its ability to prepare students to work with patients from different cultures. Students and teachers were exceptionally positive when it came to the specificity of the course, course materials, etc. These studies show that both LSP and TBLT are viable pedagogical choices and can coexist (Hattani, 2020).

The following two studies—Serafini and Torres (2015) and Malicka et al. (2019)—have informed the research framework of this study and are, therefore, worth reviewing in some detail. Serafini and Torres (2015) present the findings of a task-based NA conducted in order to inform the design of a university-level Spanish for Business course. Participants of the study were domain insiders (those working in business contexts or teaching business) and domain outsiders (business majors). The study breaks down the methodology into three distinct phases: 1) qualitative data 2) quantitative data and 3) curriculum design. Phase 1 elicited domain

insiders' responses on an open-ended survey about types of tasks that were frequently encountered in the workplace. The results of the survey were refined into a list of tasks. Phase 2 used these tasks to generate a closed-ended online questionnaire that was sent to university students majoring in business. The questionnaire asked respondents to rate the frequency and difficulty of each task. In this phase the tasks were further categorized according to modality and language skill (speaking, listening, reading, and writing). Finally, Phase 3 analyzed the tasks according to their frequency and difficulty, and a finalized list of tasks was created. Each task was placed into one of five broader categories, called target task types (TTTs), which were used to inform pedagogical decisions and course design. There are a few limitations of the study. For one, the sample size was quite small and therefore not necessarily indicative of the entire population. Second, information about the participants' work experience and area of specialty was not collected, which could have been useful.

Malicka et al. (2019) implements a task-based NA in an English for Specific Purposes context. The study aims to identify several tasks that are common among hotel receptionists, pinpoint the language skills underlying these tasks, classify the tasks according to their perceived difficulty, and offer suggestions for sequencing these tasks in an ESP syllabus. Participants for the study were labelled either domain experts (hotel receptionists) or domain novices (tourism students). The methodology for the study included ten semi-structured interviews and several observations at the jobsite. First, semi-structured interviews were conducted with both domain experts and novices about typical tasks they performed and their frequency in the workplace as well as the cognitive and linguistic difficulty of these tasks. Interviews lasted about an hour and were conducted in English, though participants were allowed to use their L1 when necessary. Detailed field notes were taken during the observations of interactions between participants and

their clients. Triangulation of both methods and sources was used in that both interviews and observations were used with both the domain experts and the domain novices. The researchers coded the notes and the interview transcripts to determine target task categories, frequency, cognitive and linguistic difficulty, etc. One limitation of the study was that it was conducted on a relatively small-scale, meaning that results cannot be extended to other populations. Also, there was a lack of quantitative data which would have offered more credence to the qualitative data collected.

The current study will draw from both Serafini and Torres (2015) and Malicka et al. (2019) in its methodology and research framework. For example, similar to Serafini and Torres (2015), the current study will use phases of research that build upon the results of the previous phase, creating a sort of checks-and-balances system. Both questionnaires in the current study will be comparable to the example study in that the first will ask a variety of sources to generate typical tasks while the second will ask participants to rate the frequency of those tasks on a Likert scale. Methods will also follow a similar pattern of open procedures to closed procedures as recommended by Long (2005). As in Serafini and Torres (2015), the data will be refined and streamlined into a list of tasks that can be used to inform course design and classroom practices following recommendations of deriving pedagogical tasks proposed by Van Avermaet & Gysen (2006). Like Malicka et al. (2019), the current research uses semi-structured interviews as primary tools in its methodology and triangulation of sources. The present study also seeks to determine the frequency of the tasks provided, but instead of determining complexity, criticality or importance will be the second variable (Long, 2015).

There are also several ways in which the current study improves upon the example studies by Serafini and Torres (2015) and Malicka et al. (2019). First, the study will collect more

demographic information on the participants such as areas of specialty and work experience. Also, quantitative data is used in addition to qualitative data. As recommended by Long and Serafini et al. (2015), the current research utilizes stratified random sampling when recruiting participants as well as member checking—relaying the initial results of each phase of the study to the participants—to gain more credibility. The study also recruits a wider variety of sources (i.e., patients, administrators, nurses, etc.) than both studies. These improvements are also informed and reinforced by more recent publications on task-based NAs such as Gilabert and Malicka (2022) and Serafini (2022).

CHAPTER 3: METHODOLOGY

The methodology for the current mixed methods study is an example of a task-based NA that draws on the methodologies of two other studies: Serafini & Torres (2015) and Malicka et al. (2019) as well as general methodological recommendations for task-based NA from Long (2005), Van Avermaet and Gysen (2006), and Long (2015). There were three phases of research, each with its own data collection and analysis methods (Figure 1). Phase 1 was divided into two subphases. The first subphase focused on domain insiders (DIs), or former LEP patients, and their perspective of ER settings and the language barriers that affected the care they received. In the second subphase, a variety of open-ended measures were used to determine tasks common in ER settings as reported by domain superiors (DSs), ER managers and nursing faculty, and domain experts (DEs), nurses and advanced nursing students. In Phase 2, DSs and DEs rated the frequency and importance of these tasks. In Phase 3, DSs and DEs reviewed and verified the list of tasks in follow-up interviews. Between each phase of research, the data was analyzed and updated for use in the subsequent phase. First in this section, the participants and the context are explained. Then each phase of research and its corresponding procedures are presented.

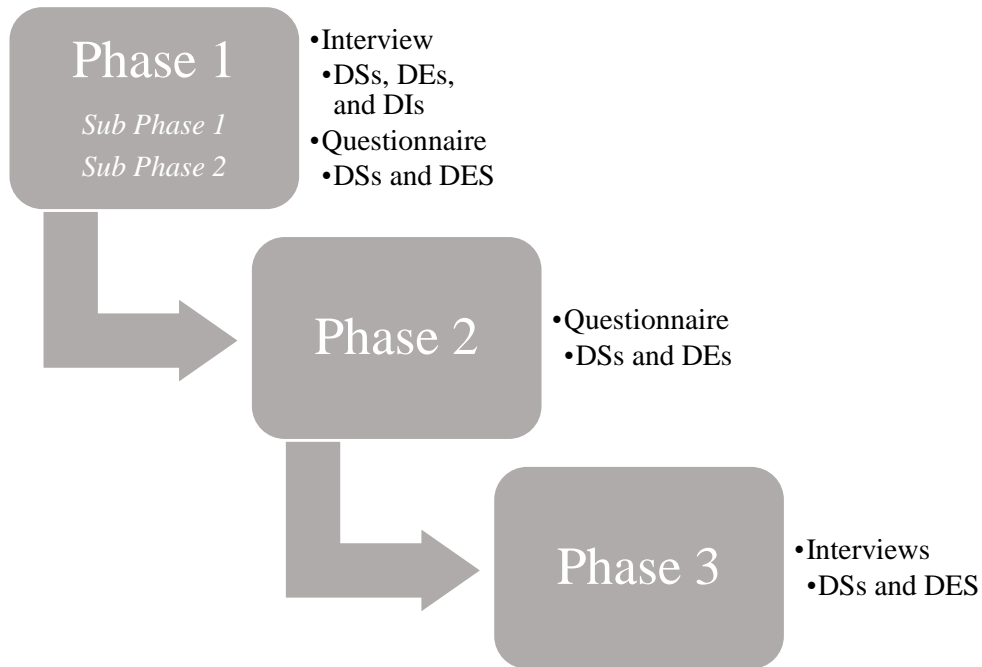


Figure 1

Methods Overview

Background

Context

There were three contexts for the study 1) a hospital emergency room (ER) 2) a university nursing program (NP) and 3) two English as a Second Language programs (ESL1) and (ESL2).

Emergency Room (ER)

The first context for the study was the hospital emergency rooms (ER). Prior to the study, the researcher reached out to the Institutional Review Boards (IRBs) and administrators at various hospitals to determine whether the facility would be both allowed and willing to

participate. The researcher also spoke to hospital managers and hospital superiors about the logistics of conducting research in the context. The ER ultimately selected for the study was the most willing to participate and claimed to have a large number of Spanish-speaking, LEP patients on a regular basis. Several other hospitals were also considered for the research, but logistically could not be included in the study due to conflicts with IRB approval that could not be resolved in a manner fitting the timeline constraints of the research.

The ER chosen for this study is in an urban area in the Southeast United States. The hospital is one of the highest-volume hospitals in its state and the flagship hospital for the city. An 80-acre campus with research facilities and physicians' office buildings surround the hospital. Outside the medical campus, there is a mixture of residential, commercial, and public spaces. While the hospital is considered a part of the metro area, it is on the outer edges of the city, about thirty minutes from the downtown hub. A total of 20 participants were recruited from the ER context—one ER manager, two head nurses, and 17 nurses. These participants were either DSs or DEs.

Nursing Program (NP)

The second context for the study was a university nursing program (NP). The NP is a part of a four-year university in the Southeastern United States and offers the following undergraduate and graduate programs: BSN (Bachelor of Science in Nursing), accelerated BSN, RN-BSN, MSN (Master of Science in Nursing), post-MSN, and PhD. All programs were eligible to participate in the study; however, only BSN students responded to recruitment. The BSN program lasts for a total of five semesters with clinical rotations in the last two semesters. The accelerated BSN program lasts for a total of two traditional semesters and one summer semester

with clinical rotations in the second semester and the summer semester. Prior to the research, the researcher reached out to the NP director and other superiors in the department about the feasibility of recruiting participants from that location. A total of three participants were recruited from this context—one part-time clinical instructor and two advanced nursing students. The number of participants from this context was smaller than expected, possibly because the students felt that they did not have enough ER experience for the study even though it was specified that clinical rotations in an ER would fulfill this requirement. Participants from this context were either DSs or DEs.

English as a Second Language Programs (ESL1 and ESL2)

The third context for the study was two ESL programs. The first ESL program for the study (ESL1) is sponsored by a local church and offers free, 1-hour weekly English classes for beginner, intermediate, and advanced levels. At the time of the study, ESL1 had 20 students enrolled. The second ESL program (ESL2) is also sponsored by a local church and is located in a primarily Spanish-speaking area. ESL2 offers adult English classes for all levels (beginner, intermediate, and advanced) as well as a bilingual preschool program for children of the students. Classes are bi-weekly and last 1.5 hours. A morning and night class is available. At the time of the study, ESL2 had 100 students enrolled.

ESL1 was chosen for the study because the researcher had volunteered previously several years ago and had prior knowledge of the program. However, the researcher had no connection with any of the current program staff or students. A total of three students were recruited from ESL1, all of which were DIs. ESL2 was chosen because the researcher was currently volunteering in the program. The researcher did not recruit any of her own students. A total of 11

participants were recruited from ESL2, all of which were DIs. From both ESL1 and ESL2, there were 14 participants, all DIs, recruited from this context.

Participants

There were three types of participants in the study 1) domain superiors (DSs)—ER managers, head nurses, and nursing faculty 2) domain experts (DEs)—ER nurses, advanced nursing students and 3) domain insiders (DIs)—Spanish-speaking, LEP former patients. All participants were recruited via convenience sampling and stratified sampling. To recruit ER managers, head nurses, and nurses, the researcher sent out an email to the ER manager about the study and posted a participant sign-up sheet and informational poster in the break room and other frequented areas. The researcher also visited the hospital during the morning ‘safety huddles’ to collect these sign-up sheets and to read a brief script about the project. To recruit nursing faculty and advanced nursing students, the researcher sent an email detailing the study to the department chair and department advisors who then sent the email to all nursing students and faculty. Finally, to recruit ESL students, the researcher visited the ESL classrooms and read a brief script about the project before classes commenced and posted a participant sign-up sheet in frequented common areas.

Requirements to participate in the study were clearly explained and outlined in recruitment materials. All participants had to be adults (18 years or older). The specific requirements for DSs were to be able to speak English fluently and have experience in an ER setting in the Southeast prior to or at the time of the study. The same criteria applied to DEs. Nursing students could fulfill the ER experience requirement by participating in clinical rotations or holding an externship at an ER in the Southeast prior to or at the time of the study. DIs were

required to speak limited English and speak Spanish as a native language. The ESL programs from which participants were recruited offered classes for various proficiency levels of English. Students from all proficiency levels were eligible for participation because, in the context of these two programs, even students from advanced classes would struggle with a language barrier. The final requirement for DIs was to have experienced treatment in an ER setting in the Southeast prior to the study.

The initial number of participants among all groups was 44. Six participants had to ultimately be excluded from the study because of either withdrawal of consent or incomplete questionnaires. There were six domain superiors, 20 domain experts, and 14 domain insiders. Therefore, the total number of participants in this study was 38. Demographics of the participants of each group are represented in Table 1.

Table 1

Participant Demographics

Group	Position	Years of Experience	Number of Participants
Domain Superior	ER manager	Less than 1 year	0
		1-2 years	0
		2-5 years	0
		5-10 years	0
		10 or more years	1
		Total	1
	Head nurse	Less than 1 year	0
		2-5 years	0
		5-10 years	1
		10 or more years	1
		Total	2
	Nursing faculty	Less than 1 year	0
		1-2 years	0

Table 1 (Continued)*Participant Demographics*

Group	Position	Years of Experience	Number of Participants
		2-5 years	0
		5-10 years	0
		10 or more years	1
	Total		1
Total			4
Domain Expert	ER nurse	Less than 1 year	0
		1-2 years	3
		2-5 years	11
		5-10 years	2
		10 or more years	1
	Total		17
	Advanced nursing student	Less than 1 year	1
		1-2 years	1
		2-5 years	1
		5-10 years	0
		10 or more years	0
	Total		3
Total			20
Domain Insider	LEP, former patient	N/A	14
Total			14
Overall Total			38

Domain Superiors

The first group of participants was domain superiors. This group consisted of ER managers, head nurses, and nursing faculty. DSs were recruited from two separate contexts. ER managers and ER nurses were recruited from the ER while nursing faculty were recruited from the university NP. A total of three DSs were recruited from the ER, and only one DS was recruited from the NP. The DSs identified themselves as either a part-time clinical instructor, ER manager, or head nurse. All four participants completed the Phase 1 questionnaire, and three

participants completed the Phase 2 questionnaire. Of these four participants, three participated in the Phase 1 interview and two participated in the Phase 3 interviews. The participation of DSs is represented in Table 2.

Table 2

Domain Superior Participation

Participant	Position	Phase 1 Questionnaire	Phase 1 Interview	Phase 2 Questionnaire	Phase 3 Interview
Participant #9	part-time clinical instructor	Yes	Yes	Yes	Yes
Participant #13	ER manager	Yes	No	No	No
Participant #15	head nurse	Yes	Yes	Yes	Yes
Participant #23	head nurse	Yes	Yes	No	No

Domain Experts

The second group of participants was domain experts. This category was made up of ER nurses and nursing students. DEs were recruited from two different contexts. ER nurses were recruited from the ER. A total of 17 ER nurses participated in the study. The majority of these participants held a BSN in Nursing. Nursing students were recruited from the university NP. A total of three nursing students from were recruited for this study. These students were all undergraduates pursuing a BSN degree. All of these students fulfilled the ER experience requirement through externships. The total number of DE participants was 20. A visual representation of DE participation is in Table 3.

Table 3*Domain Expert Participation*

Participant	Position	Phase 1 Questionnaire	Phase 1 Interview	Phase 2 Questionnaire	Phase 3 Interview
Participant #6	advanced nursing student	Yes	Yes	No	No
Participant #21	Nurse	Yes	No	No	No
Participant #24	Nurse	Yes	Yes	Yes	No
Participant #26	Nurse	Yes	No	No	No
Participant #28	Nurse	Yes	No	No	No
Participant #29	nurse	Yes	No	No	No
Participant #30	nurse	Yes	No	No	No
Participant #32	nurse	Yes	No	No	No
Participant #33	nurse	Yes	Yes	Yes	No
Participant #34	nurse	Yes	No	Yes	No
Participant #35	nurse	Yes	No	Yes	No
Participant #36	nurse	Yes	No	Yes	No
Participant #37	nurse	Yes	No	No	No
Participant #38	nurse	Yes	No	No	No
Participant #39	nurse	Yes	No	No	No
Participant #40	nurse	Yes	Yes	Yes	Yes
Participant #41	nurse	Yes	No	Yes	No
Participant #42	nurse	Yes	No	No	No
Participant #43	advanced nursing student	Yes	No	Yes	Yes
Participant #44	advanced nursing student	Yes	Yes	Yes	Yes

Domain Insiders

The third group of participants was domain insiders. This group was made up solely of Spanish-speaking, LEP individuals who have been patients in ERs in the Southeast US prior to

the research. DIs were gathered from one of two ESL programs: ESL1 or ESL2. Eleven DIs were recruited from ESL1, and three participants were recruited from ESL2. These participants came from a variety of English proficiency levels (Table 4) but were all English language students. There were five advanced students, eight intermediate students, and one beginner student. A total of 14 DIs participated in the study. Domain insiders only participated in the first subphase of the first phase of research.

Table 4

Domain Insiders' Level of English Proficiency

Participant	Level of English
Participant #8	Advanced
Participant #18	Advanced
Participant #19	Advanced
Participant #3	Advanced
Participant #14	Advanced
Participant #12	Beginner
Participant #1	Beginner
Participant #2	Beginner
Participant #4	Intermediate
Participant #7	Intermediate
Participant #10	Intermediate
Participant #11	Intermediate
Participant #16	Intermediate
Participant #17	Intermediate

Procedures

Phase 1

Phase 1 was divided into two subphases, the first of which was centered on DIs and their perspectives of ER settings and how language barriers impacted the care they received. DIs were recruited from ESL1 and ESL2 via a combination of convenience sampling and stratified sampling. Potential participants first reviewed consent forms provided in Spanish with the researcher who speaks Spanish as a second language. If they gave consent, they were then asked to participate in a semi-structured interview in which they answered questions about their linguistic background, experiences in the ER, and thoughts on how their care was impacted by the language barrier.

In the second subphase of Phase 1, a variety of open-ended measures were used to determine tasks common in ER settings as reported by DSs and DEs. First, the researcher recruited participants from the ER and the university NP using convenience and stratified sampling. Then DSs and DEs were sent an online consent form and completed an electronic, open-ended survey about tasks performed in an ER setting. All participants were invited to participate in semi-structured interviews designed for member checking and for interviewees to expound upon their questionnaire responses. The researcher compiled data from both the questionnaire and the semi-structured interviews into a streamlined list of tasks to be used in Phase 2.

Phase 1 Data Collection

P1 questionnaire. The first data collection instrument was the electronic questionnaire (Appendix A) and was solely for DSs and DEs. The questionnaire consisted of six items. The first five items asked participants for demographic information such as contact information, years of experience in the E.R., E.R. location, position, and education. The final open-ended item asked the participants to list at least three tasks performed or witnessed in the ER setting.

P1 interview protocol. The second instrument was the semi-structured interview protocol (Appendix B). There were three different protocols for each group of participants. The DSs' protocol consisted of seven questions. DIs were asked questions about basic personal information (native language, work position, work experience, etc.), the number of LEP, Spanish-speaking patients encountered at the hospital, and the value placed on Spanish skills in ER nurses. The interview protocol for DEs consisted of a total of six questions. DEs were asked questions about basic personal information (primary language, work experience, Spanish experience, etc.), the amount of LEP, Spanish-speaking patients encountered in the workplace, and experiences in which they would have benefited from knowing Spanish. The final interview protocol for Phase 1 was for DIs and consisted of a total of five questions. DIs were asked questions about basic personal information (native language, English proficiency, etc.), experiences in ER settings, how their limited English proficiency affected the care they received, and aspects of the ER visit that caused the most linguistic confusion. The interview protocol for the domain insiders was translated into Spanish by the researcher and checked by a translator from ESL2 before being presented to the participants. DI interviews were conducted in Spanish.

Phase 1 Data Analysis

The researcher grouped, merged, and clarified the questionnaire responses and compiled the list of tasks in random order. The categorized list of tasks (Task List 2) was the basis for data collection in Phase 2. The procedures for Phase 1 are provided in a visual format in Figure 2.



Figure 2

Phase 1 Procedures

Phase 2

In Phase 2, DSs and DEs rated the frequency and importance of the tasks generated in Phase 1 by completing an online questionnaire. They also verified that the researcher had chosen appropriate categories for the smaller sub-tasks mentioned in Phase 1.

Phase 2 Data Collection

P2 questionnaire. The only data collection instrument for Phase 2 was the P2 questionnaire (Appendix C). The questionnaire listed tasks performed in an ER setting as reported by the participants in the previous questionnaire and grouped into more general categories by the researcher. Participants were provided with a Likert scale for rating both frequency and importance. For frequency, participants could choose to rate a task from 1-4: 1=never, 2=sometimes, 3=often, and 4=very often. For importance, participants could choose to

rate a task from 1-4: 1=not important, 2=slightly important, 3=important, and 4=very important. Because the researcher had translated the verbatim responses of the participants in Phase 1 into tasks and sub-tasks, participants were asked to also indicate which subtasks belonged to specific tasks as a form of member checking. For each major task (e.g., obtaining a patient's vital signs), sub-tasks were listed. Participants were asked to select whether they applied to the category, or task, created by the researcher.

Phase 2 Data Analysis

The frequency and importance of each of the tasks from Phase 1 were calculated and then added for an overall score for each task. The researcher created a list of tasks in descending order according to their overall score. Sub-tasks which a majority of participants agreed were relevant to the task were included beneath each task. This list was used for the follow-up interviews in Phase 3. A visual representation of Phase 2 procedures is provided in Figure 3.



Figure 3

Phase 2 Procedures

Phase 3

In Phase 3, DSs and DEs reviewed the list of ranked tasks and their subtasks before participating in follow-up interviews for the purpose of both member checking and to expound upon Phase 2 questionnaire responses.

Phase 3 Data Collection

P3 interview protocol. For Phase 3, the only data collection instrument was the follow-up interview protocol (Appendix D). The protocol included presenting the list of ranked tasks to the participants and asking a series of questions. Participants were again asked which tasks they found to be the most important and most frequent. They were also asked if they agreed with the rankings of the tasks. The participants were then asked to do the same for the subtasks. Finally, the participants were asked to review the list of tasks and sub-tasks and offer suggestions, clarifications, etc.

Phase 3 Data Analysis

The researcher revised the list of tasks based on the participants' input in the follow-up interviews. If a majority (over half) of the participants suggested a change, the revision was made. This ranking resulted in a final list of tasks from which pedagogical tasks could be derived. The procedures for Phase 3 are visually represented in Figure 4.



Figure 4

Phase 3 Procedures

CHAPTER 4: RESULTS

Introduction

This chapter will outline the results of the study according to each phase of the research. Quantitative data will be presented in the form of questionnaire results whereas qualitative data results are presented as emergent themes coded from the interviews. Qualitative data will be expounded upon in Chapters 5 and 6. The results for each phase will conclude with the resulting list of tasks that culminated at the end of the data analysis for the respective phase.

Phase 1 Results

Summary of Phase 1 Procedures

In this phase, DIs took part in semi-structured interviews where the former patients provided information on their experience in the ER and perspective on language barriers in healthcare. Then DSs and DEs took part in the P1 questionnaire which elicited demographic information about the participants as well as tasks for Task List 1. DSs and DEs were then invited to expound upon their answers in semi-structured interviews. Quantitative data for the phase comes from the P1 questionnaire, whereas qualitative data results derive from the P1 interviews in the form of themes, later discussed in Chapters 5 and 6. The results from Phase 1 led to Task List 1 which is outlined later in this section.

P1 Questionnaire Results

The P1 questionnaire had twenty-four participant responses. For the item, ‘years of experience,’ one participant chose the option ‘less than one year;’ 12 participants chose ‘2-5

years;’ three participants chose ‘5-10 years;’ and four participants chose ‘10 or more years.’ The results show that most participants had between two and five years of ER experience at the time of the study, followed by five to ten years of experience. Very few participants had less than one year of ER experience or more than ten years of experience.

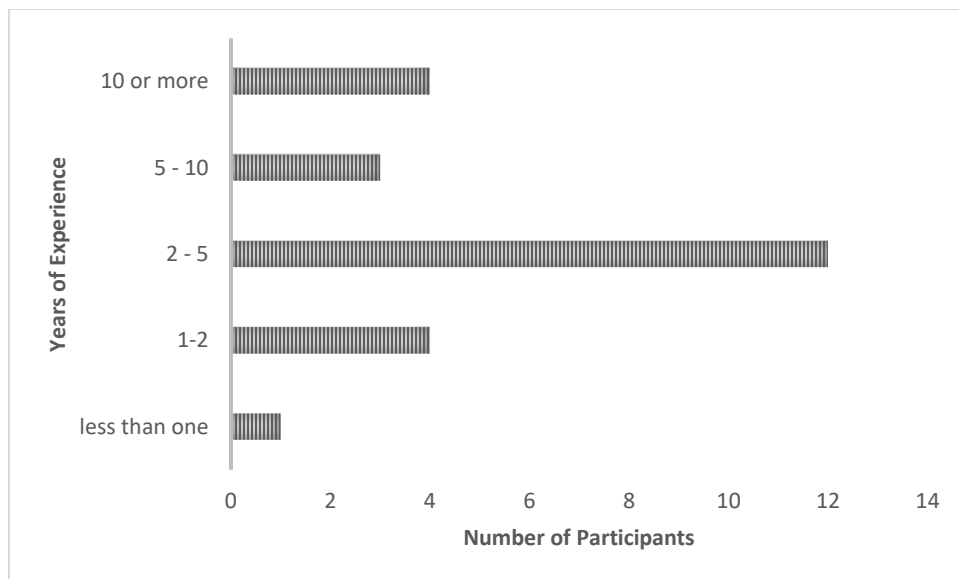


Figure 5

Years of Experience for Domain Superiors and Domain Experts

The next item asked the participants’ position at the hospital. The majority of the participants were ER nurses (17), followed by advanced nursing students (3), then head nurses (2), and finally one nursing faculty and one ER manager. The subsequent item required participants to select the highest level of education they had received in nursing, or in the case of students, what degree they were pursuing. The majority of the participants (12) selected ‘BSN.’ Eight participants chose the ‘ASN’ (Associated Degree of Nursing) option and one participant

chose ‘MSN.’ One participant chose ‘Other’ and two options—‘PSN’ and ‘PMC’—were not represented.

The final item of the questionnaire was open-ended and fed directly into Task List 1 generated at the end of Phase 1.

P1 Interview Themes

Qualitative data was elicited by the P1 interview protocol. The set of questions for DIs was quite different from those of DEs and DSs because it viewed the topics at hand from a unique perspective, that of the patient instead of the healthcare provider. Nevertheless, many of the same themes were still present throughout all the interviews. Coding was done via NVIVO 12 Plus, through which the researcher assessed emergent themes elicited by the interview questions and derived from notes taken by the researcher throughout the data collection process. First, key topics, or nodes, were created according to predetermined topics and key words derived from the research question (i.e., language, language barriers in healthcare, tasks in healthcare, etc.). Then these nodes were expanded and elaborated (i.e., interpretation and translation) to form the final 11 nodes of the research. These nodes were then grouped into larger categories to form four core themes: the importance of Spanish in ER settings, the ER experience for Spanish-speaking, LEP patients, the desire for language reform in the ER, and language used in the ER. These themes and their respective nodes as well as their respective frequency counts are represented in Table 5. The discussion section introduces and expounds on the themes present in the Phase 1 interviews.

Table 5*Phase I Interview Codes and Emerging Themes*

Theme	Code	Frequency Count
The importance of Spanish in ER settings	Frequency of interaction with Spanish-speaking, LEP patients	9
	The impact of the language barrier	17
	The value placed on Spanish-speaking ER nurses	4
	Total	30
The ER experience for Spanish-speaking, LEP patients	Hospital experience and care	38
	Total	38
The desire for language reform in the ER	The desire to take an ER nursing course	19
	The state of interpretation and translation	37
	Total	56
Language used in the ER	The areas of most linguistic confusion	16
	Medical terms and phrases	42
	Tasks	35
	Language Use	53
	Reading	6
	Writing	4
	Listening	16
	Speaking	27

Table 5 (Continued)

Phase 1 Interview Codes and Emerging Themes

Theme	Code	Frequency Count
	Total	146
	Overall Total	270

The most frequent node coded was language use’ with 53 instances followed closely by ‘medical terms and phrases’ with 42 instances. The theme that emerged from these nodes was also the most frequent theme, ‘language used in the ER’ with a total of 146 instances. Because this theme is so frequent, it deserves more attention in the discussion and is separated from the three previous themes into its own section.

P1 Task List

A total of 260 responses were provided by participants for the final item of the P1 questionnaire. Any repeat tasks were deleted. For example, five participants put “starting IVs,” but only one was recorded. Nearly identical tasks were also deleted, keeping only the most frequent response. For example, the responses ‘starting an IV,’ ‘IVs,’ ‘IV,’ ‘start IV,’ ‘place IV,’ ‘IV insertion’ and ‘IV placement’ were combined into the single task, ‘starting IVs’ which was the most frequent of these responses. The deletion of duplicates and nearly identical tasks resulted in a list of 130 tasks. Then three tasks were deleted that did not involve patient interaction because the patient was unconscious (perform CPR, postmortem care, and sedation), resulting in a total of 127 tasks. Similar tasks were then grouped together to form 24 category tasks or CTs. For example, the task ‘starting IVs’ was placed in a newly created CT, ‘inserting/placing lines and/or tubes.’ The researcher then asked two colleagues who helped to

further condense and format the list, resulting in a final nineteen CTs with 97 sub-tasks (STs).

The final list, Task List 1, is presented in random order, with no order of importance or frequency (Table 6).

Table 6

Task List 1

Category Task (CT)	Subtask (ST)
Obtaining a patient's vital signs	Obtaining a patient's heart rate (HR) Obtaining a patient's respiratory rate (RR) Obtaining a patient's oxygen saturation (O2 sat) Taking a patient's blood pressure Listening to a patient's breathing Listening to a patient's heart Taking a patient's temperature Listening with a stethoscope
Administering medications and/or treatments to a patient	Giving shots Calculating TPA (Tissue Plasminogen activator) dose Administering TPA (Tissue plasminogen activator) Administering eye drops Administering ear drops Applying slings and casts Applying steri-strips Applying dressings Administering oxygen using a simple mask, non-rebreather, or BVM Administering blood and/or blood products Performing an intraosseous infusion (IO) Administering nebulizer treatments
Inserting and/or placing lines and/or tubes in a patient	Starting a central line Starting an ART line Starting an IV Starting a peripheral IV

Table 6 (Continued)

Task List 1

Category Task (CT)	Subtask (ST)
Inserting and/or placing a catheter in a patient	Placing an NG tube
	Inserting a chest tube
	Intubating
	Inserting a Foley catheter
	Inserting an in and out catheter
	Inserting an intravenous catheter
	Inserting an indwelling catheter
	Inserting a straight catheter
	Inserting an external catheter (male & female)
	Inserting a urinary catheter
Managing a patient's condition	Managing a urinary catheter
	Managing an EKG
	Managing a chest tube
	Managing a patient's temperature on a bair hugger
	Accessing a port
Performing medical procedures and/or treatments to/on a patient	Delivering a baby
	Performing a vagal maneuver
	Performing an enema disimpaction
	Removing foreign objects from ear
	Flushing eyes
	Splinting broken bones
	Suturing
	Sedating patients (moderate/conscious sedation)
	Performing diagnostic medical procedures and/or treatments to/on a patient
Performing diagnostic medical procedures and/or treatments to/on a patient	Performing an EKG
	Performing a lumbar puncture
	Performing paracentesis
	Placing a patient on a cardiac monitor

Table 6 (Continued)

Task List 1

Category Task (CT)	Subtask (ST)
Managing a patient's medications	Performing a venipuncture
	Titrating medications
	Titrating BP medications
Assisting with medical procedures and/or treatments performed to/on a patient	Assisting with a radiology procedure
	Assisting with sutures
	Assisting with a live birth
	Irrigating a bladder
	Assisting with a pelvic exam
	Assisting with a closed reduction
	Assessing a patient's condition
Assessing pain	
Performing a primary assessment	
Performing a head to toe assessment	
Assessing skin condition	
Assessing wounds	
Performing a NIH exam or neurological exam	
Documenting assessments or charting a patient's condition	
	Calling report
	Giving a bedside report
	Notifying a doctor of patient status and changes
	Educating a patient or a patient's family
Explaining discharge instructions	
Monitoring a patient's condition	Monitoring ventilator settings
Transporting or physically handling a patient	Assisting a patient to the restroom

Table 6 (Continued)

Task List 1

Category Task (CT)	Subtask (ST)
Collecting lab specimens from a patient	Lifting, pulling, pushing of patients
	Applying restraints
	Drawing blood
	Collecting urine
	Swabbing nose
	Swabbing throat
Caring for a patient's hygiene and/or comfort	Obtaining point-of-care labs
	Checking blood sugar levels
	Changing bedding and/or clothes
	Giving baths
	Cleaning dressings on a tracheostomy
	Dressing wounds
Feeding a patient	Performing Peri (perineal) care
	Feeding via Peg tube
	Feeding via NG tube

Phase 2 Results

Summary of Phase 2 Procedures

In Phase 2, participants were asked to rank the CTs from Phase 1 based on frequency and then based on importance. Participants were also given a list of STs and asked to verify whether or not they fit into the assigned CT. Only quantitative data was analyzed from this phase which was derived from the P2 questionnaire. The result of data analysis for Phase 2 was Task List 2.

P2 Questionnaire Results

There were 11 responses to the P2 questionnaire. For the first item, participants were provided with a Likert scale for rating both frequency and importance. For frequency, participants rated each of the 19 CTs from 1-4: 1=never, 2=sometimes, 3=often, and 4=very often. The average frequency of the CTs was 3.63. The CT with the lowest frequency was ‘feeding a patient’ (2.82) and the two highest frequency CTs were ‘obtaining a patient’s vitals’ (4.0) and ‘administering medications and/or treatments to a patient’ (4.0). For importance, participants rated each of the 19 CTs from 1-4: 1=not important, 2=slightly important, 3=important, and 4=very important. The average importance of the CTs was 3.65. The least important CT was ‘feeding a patient’ (2.91). There were three CTs with the maximum value (4.0) for importance: ‘assessing a patient’s condition,’ ‘managing a patient’s condition,’ and ‘obtaining a patient’s vitals.’

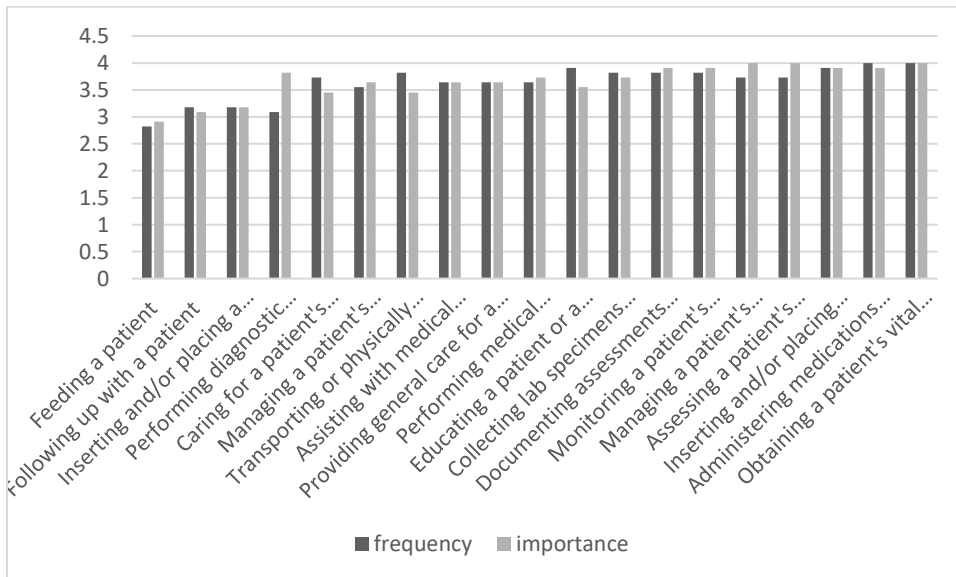


Figure 6

Frequency and Importance of Category Tasks

The value for frequency and the value for importance were added together for each CT and compared. With the maximum possible value at 8.0, the average total for both values was 7.29. The CT with the lowest overall total for both frequency and importance was ‘feeding a patient’ (5.73). ‘Obtaining a patient’s vitals’ had the highest overall total of both values with the maximum possible value of 8.0. To easily compare the CTs according to both frequency and importance, the values were graphed (Figure 6). Most of the CTs (13) were located in the upper right quadrant signifying the most frequent and the most important tasks. Only two CTs— ‘caring for a patient’s hygiene/comfort’ and ‘transporting or physically handling a patient’— were graphed in the lower right quadrant signifying the most frequent and the least important tasks. ‘Performing diagnostic medical procedures and/or treatments performed to/on a patient’ was the only CT located in the upper left quadrant signifying the least frequent and the most important tasks. Finally, three CTs were graphed in the lower left quadrant signifying the least frequent and the least important tasks: ‘feeding a patient,’ ‘inserting and/or placing a catheter in a patient,’ and ‘following up with a patient.’

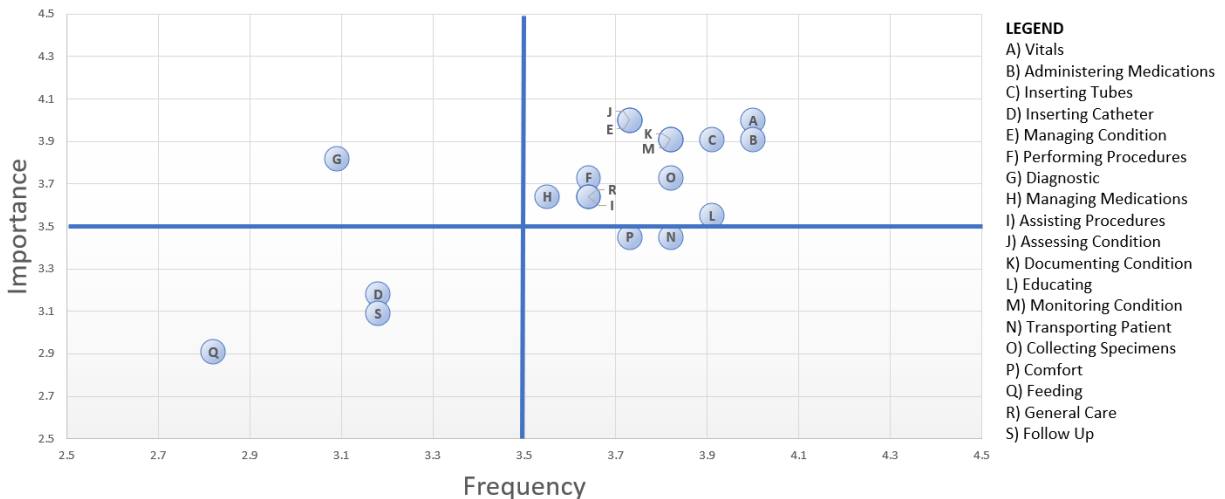


Figure 7

Phase 2 Questionnaire Results

In the second half of the questionnaire, participants were asked to indicate whether STs belonged to their assigned CTs as a measure of member checking. The formatting for this item was a checklist (Figure 8). If a participant selected one of the subtasks, the response was counted. A total of all responses for all subtasks was calculated and assigned to their respective STs. Forty-nine subtasks received the maximum number of ‘checks’ (11) or at least six or more affirmative responses. There were 18 STs that received five or less ‘checks.’ For example, only two participants verified that ‘listening to a patient’s breathing’ was appropriate in the CT ‘obtaining a patient’s vitals.’ The following STs were deleted from the list due to the low number of participants who verified it as an appropriate subtask for its respective category (Table 7). Five of the eleven participants selected ‘performing a vagal maneuver’ and ‘splinting broken bones.’ Four of the 11 participants selected ‘calculating TPA dose.’ Two of the eleven participants selected ‘listening to a patient’s breathing,’ ‘intubating,’ ‘inserting a chest tube,’ ‘starting a central line,’ notifying a doctor of patient status and changes,’ and ‘removing foreign objects from ear.’ One of the eleven participants chose ‘listening to a patient’s heart,’ ‘listening with a stethoscope,’ ‘starting an ART line,’ ‘delivering a baby,’ ‘suturing,’ and ‘performing a lumbar puncture.’ Zero of the 11 participants selected ‘calling report,’ ‘giving a bedside report,’ and ‘performing paracentesis.’

Which of the following tasks does an emergency room nurse perform when **obtaining patient's vitals**?

Obtaining a patient's heart rate (HR)

Obtaining a patient's respiratory rate (RR)

Obtaining a patient's oxygen saturation (O2 sat)

Taking a patient's blood pressure

Listening to a patient's heart

Listening to a patient's breathing

Figure 8

Screenshot of Phase 2 Online Questionnaire

Table 7

Subtasks Deleted Based on Low Participant Response

Subtask	Participant Responses
Performing a vagal maneuver	5
Splinting broken bones	5
Calculating TPA dose	4
Listening to a patient's breathing	2
Intubating	2
Inserting a chest tube	2
Starting a central line	2
Notifying a doctor of patient status and changes	2

Table 7 (Continued)

Subtasks Deleted Based on Low Participant Response

Subtask	Participant Responses
Removing foreign objects from ear	2
Listening to a patient's heart	1
Listening with a stethoscope	1
Starting an ART line	1
Delivering a baby	1
Suturing	1
Performing a lumbar puncture	1
Calling report	0
Giving a bedside report	0
Performing paracentesis	0

Task List 2

After analysis, the CTs were ranked according to the overall total value of both frequency and importance. STs were then deleted according to a majority ruling. If a majority (6 or more) of the participants assigned a ST to a CT, it was kept; however, if a majority did not assign a ST to the relative CT, the ST was removed. For Task List 2 (Table 8), CTs were given numbers according to their ranking. Brackets [] indicate how many of the eleven participants selected that STs to be indicative of the CT. STs that were removed were signified with a strikethrough. The remaining STs were assigned letters for ease of reference and listed in decreasing order for the amount of participant verifications.

Table 8*Task List 2*

Task Category	Tasks
1. Obtaining a patient's vital signs	<ul style="list-style-type: none">a. obtaining a patient's heart rate (HR) [11]b. obtaining a patient's respiratory rate (RR) [11]c. obtaining a patient's oxygen saturation (O2 sat) [11]d. taking a patient's blood pressure [11]e. taking a patient's temperature [11]listening to a patient's breathing [2]listening to a patient's heart [1]listening with a stethoscope [1]
2. Administering medications and/or treatments to a patient	<ul style="list-style-type: none">a. giving shots [11]b. administering eye drops [11]c. administering ear drops [11]d. administering blood and/or blood products [10]e. administering TPA (Tissue plasminogen activator) [10]f. administering oxygen using a simple mask, non-rebreather, or BVM [9]g. applying dressings [8]h. applying slings and casts [7]i. administering nebulizer treatments [6]j. performing an intraosseous infusion (IO) [6]k. applying steri-strips [6]calculating TPA (Tissue Plasminogen activator) dose [4]
3. Inserting and/or placing lines and/or tubes in a patient	<ul style="list-style-type: none">a. starting an IV [11]b. starting a peripheral IV [11]c. placing an NG tube [11]intubating [2]starting a central line [2]inserting a chest tube [2]starting an ART line [1]
4. Managing a patient's condition	<ul style="list-style-type: none">a. managing a chest tube [11]

Table 8 (Continued)

Task List 2

Task Category	Tasks
	b. managing a urinary catheter [10] c. managing a patient's temperature on a bair hugger [10] d. managing an EKG [9] e. accessing a port [9]
5. Assessing a patient's condition	a. triaging [11] b. assessing pain [11] c. performing a primary assessment [11] d. performing a head-to-toe assessment [11] e. assessing a skin condition [11] f. assessing wounds [11] g. performing a NIH exam or a neurological exam [11]
6. Documenting assessments or charting a patient's condition	a. documenting wounds [9] b. notifying a doctor of patient status and changes [2] c. calling report [0] d. giving a bedside report [0]
7. Monitoring a patient's condition	a. monitoring ventilator settings [11]
8. Collecting lab specimens from a patient	a. drawing blood [11] b. collecting urine [11] c. swabbing nose [11] d. swabbing throat [11] e. obtaining point-of-care labs [11] f. checking blood sugar levels [11]
9. Educating a patient or a patient's family	a. Educating a patient or patient's family on health problems [11] b. Explaining discharge instructions [10]
10. Performing medical procedures and/or treatments to/on a patient	

Table 8 (Continued)

Task List 2

Task Category	Tasks
	<ul style="list-style-type: none">a. flushing eyes [10]b. sedating patients (moderate/conscious sedation) [9]c. performing an enema disimpaction [7]d. performing a vagal maneuver [5]e. splinting broken bones [5]f. removing foreign objects from ear [2]g. delivering a baby [1]h. suturing [1]
11. Assisting with medical procedures and/or treatments to/on a patient	<ul style="list-style-type: none">a. assisting with a pelvic exam [11]b. assisting with sutures [10]c. assisting with a live birth [10]d. assisting with a closed reduction [10]e. assisting with a radiology procedure [7]f. irrigating a bladder [7]
12. Providing general care for a patient	<ul style="list-style-type: none">a. caring for a patient with a STEMI (ST-elevation myocardial infarction) [11]b. caring for a patient with a stroke [11]c. caring for a patient with an overdose [11]d. providing trauma care [10]e. providing care after a spontaneous abortion [9]
13. Transporting or physically handling a patient	<ul style="list-style-type: none">a. assisting a patient to the restroom [11]b. lifting, pulling, pushing of patients [11]c. applying restraints [11]
14. Managing a patient's medications	<ul style="list-style-type: none">a. titrating BP medications [11]b. titrating medications [11]
15. Caring for a patient's hygiene and/or comfort	

Table 8 (Continued)

Task List 2

Task Category	Tasks
	a. changing bedding and/or clothes [11] b. giving baths [11] c. performing Peri (perineal) care [11] d. cleaning dressings on a tracheostomy [10] e. dressing wounds [10]
16. Performing diagnostic medical procedures and/or treatments performed to/on a patient	a. performing an EKG [11] b. placing a patient on a cardiac monitor [11] c. performing a venipuncture [11] d. performing a lumbar puncture [1] e. performing paracentesis (0)
17. Inserting and/or placing a catheter in a patient	a. inserting a Foley catheter [11] b. inserting an in and out catheter [11] c. inserting an indwelling catheter [11] d. inserting a straight catheter [11] e. inserting a urinary catheter [11] f. inserting an external catheter (male & female) [10] g. inserting an intravenous catheter [8]
18. Following up with a patient	a. performing service recovery for a patient [11]
19. Feeding a patient	a. feeding via Peg tube [11] b. feeding via NG tube [11]

Phase 3 Results

Summary of Phase 3 Procedures

The goal of Phase 3 was to verify Task List 2 from the previous Phase 2. Participants took part in semi-structured interviews in which they were presented with Task List 2 and asked

to provide their input on the ranking of the category tasks, the appropriateness of the subtasks, and the wording and formatting of the overall list. Data from this phase is qualitative and derived from the P3 interview.

P3 Interview Themes

A total of five participants took place in the P3 interview protocol. The interviews were transcribed and coded according to suggestion type—'ranking of the category tasks,' 'appropriateness of the subtasks,' 'formatting the task list,' and 'explanation of changes' (Table 9). The most frequent of these themes was 'appropriateness of the subtasks' which was coded 39 times. The other three themes were coded at similar frequencies: 'formatting the task list' (19), 'ranking of the category tasks' (14), and 'explanation of changes' (13).

Table 9

Phase 3 Interview Codes and Emerging Themes

Theme	Code	Frequency Count
Changes to the task list	Ranking of the category tasks	14
	Appropriateness of the subtasks	39
	Formatting the task list	19
	Explanation of changes	13

P3 Task List

A majority ruling was used to make edits to Task List 2. If a majority of the participants (three or more) suggested a change, that change was made. A change log (Table 10) documented the suggestions by participant. There was a total of seven changes made when creating Task List

3. These changes are in bold. The Final Task List with all changes made and annotations removed can be found in Appendix E.

Table 10

Phase 3 Task List Change Log

Suggestion Type	Description	Participants
Formatting the Task List	Combine ST[3a]: ‘starting a peripheral IV’ and ST[3b]: ‘starting an IV’	P15, P40
	Rename CT[12]: ‘providing general care for a patient’ to ‘providing emergent care for a patient’	P40, P43, P44
	Rename ST[12a]: ‘Caring for a patient with a STEMI (ST-elevation myocardial infarction)’ to ‘preparing a STEMI (ST-elevation myocardial infarction) patient for surgery’	P40
	Rename CT[14]: ‘Managing a patient's medications’ to ‘assessing a patient's reaction to a medication’	P9
	Combine ST[16c]: ‘performing a venipuncture’ and ST[8a]: ‘drawing blood’	P9, P40, P43
	Combine ST[14a,b]: ‘Titrating BP medications’ and ‘Titrating medications’	P9
	Combine ST[17a]: ‘inserting a Foley catheter’ and ST[17c]: ‘inserting an indwelling catheter’ and ST[17e]: ‘Inserting a urinary catheter’	P9, P15, P40
	Delete ST[12g]: ‘Inserting an intravenous catheter’	P9, P40
	Combine ST[17b]: ‘Inserting an in and out catheter’ and ST[17d]: ‘Inserting a straight catheter’	P9, P15
	Merge CT[16]: ‘Performing diagnostic medical procedures and/or treatments performed to/on a patient’ and CT[8]: ‘collecting lab specimens from a patient’	P43
Appropriateness of the Subtasks	Move ST[7a]: ‘monitoring ventilator settings’ to CT[4]: ‘managing a patient’s condition’	P40

Table 10 (Continued)

Phase 3 Task List Change Log

Suggestion Type	Description	Participants
	Move ST[10b]: ‘sedating patients’ to CT[11]: ‘Assisting with medical procedures and/or treatments to/on a patient’	P9, P40, P44
	Move ST[14a,b]: ‘Titrating BP medications’ and ‘Titrating medications’	P9, P40
	Move ST[11f]: ‘irrigating a bladder’ to CT[10]: ‘Performing medical procedures and/or treatments to/on a patient’	P9, P40, P43
	Move ST[2j]: ‘Performing an IO’ to CT[3]: ‘Inserting and/or placing lines and/or tubes in a patient’	P9, P43, P44
	Move ST[4e]: ‘accessing a port’ to CT[3]: ‘Inserting and/or placing lines and/or tubes in a patient’	P43
	Add ‘pain scale’ or ‘pain assessment’ to CT[1]: ‘obtaining a patient’s vitals’	P15, P44
	Remove ST[13c]: ‘Applying restraints’	P40
	Add ‘hand feeding’ to CT[19]: ‘Feeding a patient’	P9
Ranking of the Category Tasks	Merge CT[7]: ‘monitoring a patient’s condition’ and CT[4]: ‘managing a patient’s condition’	P40
	Move CT[5]: ‘assessing a patient’s condition’ to 2nd	P9, P40, P43, P44
	Move CT[13]: ‘Transporting or physically handling a patient’ to the end of the list	P40
	Move CT[4]: ‘Managing a patient's condition’ up to 3 rd	P43
	Move CT[14]: ‘Managing a patient's medications’ up to #9	P43
	Move CT[9]: ‘Educating a patient or a patient's family’ to #12	P43

Table 10 (Continued)

Phase 3 Task List Change Log

Suggestion Type	Description	Participants
	Move CT[11]: ‘Assisting with medical procedures and/or treatments to/on a patient’ to #9	P44

The first major change made was to rename CT 12, ‘providing general care for a patient,’ to ‘providing emergent care for a patient,’ emphasis on *emergent*. Three participants (P40, P43 and P44) all agreed that this change should be made because it more accurately reflects the severity of the STs included. As Participant 44 phrased it, “I think that general care should be emergent care just because of the types of examples that are underneath it.” Participant 43 agrees by saying that patients receiving this kind of care “are our highest priority patients.”

The second change was to change the ranking of the CTs, specifically to move CT5, ‘assessing a patient’s condition,’ to the second-place position, under ‘obtaining a patient’s vitals.’ The most participants for any of the changes mentioned were in favor of this change (P9, P40, P43, and P44). Participant 9 stated that assessment is the “first thing” an ER nurse would do because one has to “make sure you're put you're measuring people's vital signs in the order of acuity, like the sickest person needs their vital signs taken first.” Participant 43 agrees: “you kind of have to do that [assess a patient] before you can really do anything else.” However, when asked to rank the CTs, participants still put CT1, ‘obtain a patient’s vitals,’ first. Participant 40 gave a probable explanation: “In real life, you do those things [assess a patient and obtain a patient’s vitals] at the same time.” The participant also introduced the term “parallel processing” to further explain:

So, it's kind of hard when you're ranking these items. A lot of them are going on at the same time, and that's why we call it parallel processing... You could use that wording to say that [indecipherable] even though it's listed 'one, two, three, four, five'. They are, they could all be happening in the same 10 minutes because one person is working on this, one person is working on this.

Two changes involved combining terms to ensure there were no duplicates. For example, one change agreed upon by three participants (P9, P40, P43) was to combine ST[16c], 'performing a venipuncture,' and ST[8a], 'drawing blood.' This change, in essence, required deleting ST16c. This choice was made because venipuncture is a blood draw, and thus, the two subtasks are synonymous. Participant 9 confirms, "That's just an IV...Drawing blood from patient." There was also a consensus on combining various catheters that were essentially the same. ST17a, 'inserting a Foley catheter,' ST17c, 'inserting an indwelling catheter,' and ST17e 'inserting a urinary catheter' were all deemed the same by three of the participants (P9, P15, P40).

There were three changes made regarding STs in the wrong CTs. For example, the suggestion was made (P9, P40, and P44) to move ST10b, 'sedating patients,' to CT11, 'assisting with medical procedures and/or treatments to/on a patient.' According to Participant 40, the ST "would make more sense under the assisting because there does, a provider has to be in the room." On the other hand, a majority of the participants (P9, P40, and P43) agreed that ST11f, 'irrigating a bladder' should be in CT10, 'performing medical procedures and/or treatments to/on a patient' because Participant 40 states: "you could irrigate a bladder on your own. Doctor doesn't have to be in the room for that." The final change involving STs was to move ST2j:

‘performing an IO’ to CT3, ‘inserting and/or placing lines and/or tubes in a patient.’ Participants (P9, P43, and P44) advocated for this change because an IO is actually an IV in the bone.

Participant 44 explains, “when you're giving when you're doing IO, you're drilling into someone's bone so you can give them medication. So, it's like it's essentially a line.”

Task List 3 (Table 11) represents these changes through the use of annotations. Additions and new placements are signified by underlining. A strikethrough is used to denote a deletion.

Table 11

Task List 3

Task Category	Tasks
1. Obtaining a patient’s vital signs	<ul style="list-style-type: none"> a. obtaining a patient’s heart rate (HR) b. obtaining a patient’s respiratory rate (RR) c. obtaining a patient’s oxygen saturation (O2 sat) d. taking a patient’s blood pressure e. taking a patient’s temperature
2. <u>Assessing a patient’s condition</u>	<ul style="list-style-type: none"> <u>a. triaging</u> <u>b. assessing pain</u> <u>c. performing a primary assessment</u> <u>d. performing a head-to-toe assessment</u> <u>e. assessing a skin condition</u> <u>f. assessing wounds</u> <u>g. performing a NIH exam or a neurological exam</u>
3. Administering medications and/or treatments to a patient	<ul style="list-style-type: none"> a. giving shots b. administering eye drops c. administering ear drops d. administering blood and/or blood products e. administering TPA (Tissue plasminogen activator) f. administering oxygen using a simple mask, non-rebreather, or BVM

Table 11 (Continued)

Task List 3

Task Category	Tasks
	<ul style="list-style-type: none">g. applying dressingsh. applying slings and castsi. administering nebulizer treatmentsj. performing an intraosseous infusion (IO)k. applying steri-strips
4. Inserting and/or placing lines and/or tubes in a patient	<ul style="list-style-type: none">a. starting an IVb. starting a peripheral IVc. placing an NG tubed. <u>performing an intraosseous infusion (IO)</u>
5. Managing a patient's condition	<ul style="list-style-type: none">a. managing a chest tubeb. managing a urinary catheterc. managing a patient's temperature on a bair huggerd. managing an EKGe. accessing a port
6. Documenting assessments or charting a patient's condition	<ul style="list-style-type: none">a. documenting wounds
7. Monitoring a patient's condition	<ul style="list-style-type: none">a. monitoring ventilator settings
8. Collecting lab specimens from a patient	<ul style="list-style-type: none">a. drawing bloodb. collecting urinec. swabbing nosed. swabbing throate. obtaining point-of-care labsf. checking blood sugar levels
9. Educating a patient or a patient's family	<ul style="list-style-type: none">a. Educating a patient or patient's family on health problemsb. Explaining discharge instructions

Table 11 (Continued)

Task List 3

Task Category	Tasks
10. Performing medical procedures and/or treatments to/on a patient	<ul style="list-style-type: none">a. flushing eyesb. sedating patients (moderate/conscious sedation)c. performing an enema disimpactiond. <u>irrigating a bladder</u>
11. Assisting with medical procedures and/or treatments to/on a patient	<ul style="list-style-type: none">a. assisting with a pelvic examb. assisting with suturesc. assisting with a live birthd. assisting with a closed reductione. assisting with a radiology proceduref. irrigating a bladder
12. Providing general <u>emergent</u> care for a patient	<ul style="list-style-type: none">a. caring for a patient with a STEMI (ST-elevation myocardial infarction)b. caring for a patient with a strokec. caring for a patient with an overdosed. providing trauma caree. providing care after a spontaneous abortion
13. Transporting or physically handling a patient	<ul style="list-style-type: none">a. assisting a patient to the restroomb. lifting, pulling, pushing of patientsc. applying restraints
14. Managing a patient's medications	<ul style="list-style-type: none">a. titrating BP medicationsb. titrating medications
15. Caring for a patient's hygiene and/or comfort	<ul style="list-style-type: none">a. changing bedding and/or clothes

Table 11 (Continued)

Task List 3

Task Category	Tasks
16. Performing diagnostic medical procedures and/or treatments performed to/on a patient	<ul style="list-style-type: none">b. giving bathsc. performing Peri (perineal) cared. cleaning dressings on a tracheostomye. dressing wounds
17. Inserting and/or placing a catheter in a patient	<ul style="list-style-type: none">a. performing an EKGb. placing a patient on a cardiac monitorc. performing a venipuncture
18. Following up with a patient	<ul style="list-style-type: none">a. inserting a Foley catheterb. inserting an in and out catheterc. inserting an indwelling catheterd. inserting a straight cathetere. inserting a urinary catheterf. inserting an external catheter (male & female)g. inserting an intravenous catheter
19. Feeding a patient	<ul style="list-style-type: none">a. performing service recovery for a patient <ul style="list-style-type: none">a. feeding via Peg tubeb. feeding via NG tube

CHAPTER 5: DISCUSSION

Need for Spanish in the Emergency Room

The following chapter expounds on the qualitative data from the study by discussing three of the four emergent themes elicited from the Phase 1 interview protocol (Appendix B). These themes are ‘the importance of Spanish in ER settings’; ‘the ER experience for Spanish-speaking, LEP patients;’ and ‘the desire for language reform in the ER’. The discussion is separated into two sections. The aim of this first section is to present the ‘need’ for Spanish in the ER as determined by the current study. The second discussion chapter will discuss the final theme, ‘language used in the ER,’ as well as present a curricular solution to the need outlined below. For the ease of reading, quotes from participants in original Spanish are provided and denoted by italics with the English translation in parentheses.

The Importance of Spanish in the ER

There were 30 instances in which participants, both patients and healthcare providers, remarked on the importance of Spanish in the ER. Several participants did so by expressing appreciation for the study. For example, a DI interviewee, Participant 11, remarked, “*entonces es bien importante...la verdad es simplemente que es muy bueno lo que están haciendo* (so it [the study] is very important...the truth is simply that it is very good what you all are doing).” Healthcare providers also echoed the sentiment such as DE Participant 33 who added, “I appreciate the study,” after explaining their dissatisfaction with the current interpreting situation in their hospital. Some participants even cited the importance of Spanish in the ER as their reason for participating in the study. For example, a former patient, Participant 16, said, “*por eso*

estoy aquí, para ver si de una forma u otra se ayuda a cualquier otra persona, para que situaciones de esta naturaleza no vuelvan a repetirse. Porque es bastante desesperante para una persona (That's why I'm here, to see if in one way or another anyone else can be helped, so that situations of this nature don't happen again. Because it's pretty desperate for a person).”

Other patients had different ways of highlighting the importance of Spanish in the ER. For example, Participant 16 explained how Spanish in the ER can impact the prestige of medical facilities, saying that “*va declinando mucho lo que es la fama o el prestigio que pueda tener...para decir si es un buen hospital or una buena institucion* (the fame or the prestige that [a hospital may have] it is declining a lot...to say that it is a good hospital or a good institution).” Participant 6, an advanced nursing student with an externship in an ER, pointed out the high stakes: “they're in a place where they don't know, a place they've never been to before. I mean, not only in a different country, but everybody's speaking a different language. That hospital, you know, they have a condition where they know that they might die.” Yet another healthcare provider, Participant 33, expressed others’ inability to realize the importance of Spanish in the ER: “they don't realize, like how like not properly communicating with someone of another language can affect their care... I've seen it happen unfortunately.” However, the most common topics concerning the importance of Spanish in the ER were the frequency of Spanish-speaking, LEP patients in the area and the impact the language barrier had on healthcare in their own experiences which will be discussed in the following sections.

The Frequency of Interaction with Spanish-Speaking, LEP Patients

There were nine instances in which participants demonstrated perceived importance of Spanish in the ER by referencing the large volume of Spanish-speaking, LEP patients in the area.

All DS and DE participants were asked in the interview how often they encountered Spanish-speaking, LEP patients. Specifically, DSs were asked, ‘How often do emergency room nurses encounter Spanish-speaking, LEP patients?’ and DEs were asked, ‘How often do you encounter Spanish-speaking, LEP patients in your work?’ All but two participants remarked that this interaction was frequent: “oh at least daily” (Participant 15); “I’d say probably every day I work” (Participant 24); “daily” (Participant 33); “every day that I work” (Participant 40). Only one participant, Participant 43, reported less than daily frequency by saying, “every shift or every other shift,” still denoting a high frequency. When asked about how often they encountered this patient population, Participant 44 had a more specific answer:

On Tuesdays, Thursdays and Saturday mornings, we have about ten Hispanics that do not. Maybe two of them speak English okay, but the rest of them do not speak any English. They are, they speak nothing but Spanish and they come in literally religiously every Tuesday, Thursday and Saturday mornings to our ER to get dialysis.

Therefore, it can be safely said that DS and DE participants agreed that there was a large volume of Spanish-speaking, LEP patients in the metro-wide area included in the study. Although DI participants were not directly asked about frequency of Spanish-speaking, LEP patients, two DI participants, nevertheless, remarked on the large number of these types of patients. For example, one former patient, Participant 2, remarked, “*di cuenta que si en su ciudad hay muchos hispanos, eso les ayuda tambien* (I realized that if there are many Hispanics in your city, that helps them too).” It was clear from the interviews that there was a universal realization that a large Spanish-

speaking, LEP patient population existed in the city in which the study took place which, in turn, lent to the perceived importance of Spanish in the ER.

The Impact of Language Barriers on Medical Care

Seventeen instances were coded in which participants demonstrated their perceived importance of Spanish in the ER by commenting on how language barriers impact healthcare. There were countless stories from former patients and healthcare providers alike about how they had personally seen the impacts of language barriers in medical settings. These anecdotes were often the result of miscommunication about a patient's condition. For example, Participant 33 talked about a Spanish-speaking, LEP patient that had come to the ER and indicated chest pain through the use of gestures and hand motions. Nurses assumed he had heart complications when he had actually fallen from a roof. They added, "I wish I had known that...[I] would have prioritized him earlier." In this case, the miscommunication about the cause of his symptoms directly affected the care that he received in that he didn't get the appropriate medical attention. These miscommunications seemed to be almost commonplace as one nurse, Participant 40, put it, "there have been things in the past where a patient is explaining a symptom that they're having, and they get treated for the wrong thing because it was translated incorrectly." Sometimes these language barriers didn't cause a tragedy but were overall frustrating and led to less than adequate care. Participant 6 stated, "we try our best to, like, help them out, but it's just like because we have that language barrier, like, we can't do any of our procedures. We can't socialize. We can't, like, lower the mood or make them more calm."

DI participants had a lot of personal stories to share about the impact of language barriers on healthcare. All the DI participants were asked 'Did your English ability impact the care that

you received,' and only two participants responded negatively. The overwhelming majority of interviewees responded in the affirmative, such as Participant 14 who said, "*si, el no poder haber comunicado mejor con la enfermera* (Yes, the inability to communicate better with the nurse)" had impacted their care negatively. Other interviewees proceeded to share personal experiences of how the language barrier had affected them. For example, the same participant followed up with an account of how a simple misunderstanding cost them hours of time:

Bueno, lo primero entendí mal...Tenía cesárea programada. Yo no he entendido que tenía que llegar dos horas antes para que me alistara entonces, ya que sobre el tiempo me tuvieron que mover más tarde.

Well, at the beginning I understood wrong. I had a scheduled Cesarean. I had not understood that I had to arrive two hours early to get me ready, so they had to move me [my appointment] to later.

Lost time is not the only result of misunderstandings; at times, the consequences can be more dire. Another patient shared an experience in which a misunderstanding about a blood draw led to a particularly traumatic event. Participant 4 related:

Llegaron estas personas y me dijeron que este, que si podía yo donar sangre porque la necesitaban y pues yo les dije que no Le dije no, 'no estoy en posición de donar mi sangre porque acabo de pasar por el parto y ya me sacaron mucha sangre.' Y dijeron varias cosas, pero yo estaba así como somnolienta porque yo

tenía este medicamento. Y se fueron. Después regresaron cuando ya estaba dormida o estaba así como inconsciente. Después entro mi esposo y le dije yo ‘¿viste esas personas que se fueron?’ Y me dice ‘si’ esas personas ya habían venido a pedirme sangre y yo les dije que ‘no’ y vinieron aquí y me sacaron la sangre.

These people came and they told me this, that if I could donate blood because they needed it, and, well, I told them I couldn't. I told them 'I'm not in a position to donate my blood because I just went through labor, and I've already had a lot of blood drawn.' And they said various things, but I was drowsy because I had this medication. And they left. Later they came back, and I was asleep or, like, unconscious. And then my husband entered, and I told him 'did you see those people that left?' and he told me 'yes' they had come to ask for blood and I told them 'no' and they came here and took my blood.

The actual reason for the blood being drawn was unknown, as the participant recalled after the fact that perhaps it was being collected for labs; however, it is obvious that the patient did not understand why the procedure was being done, and, as a result, felt violated by the healthcare providers. Participants' personal experiences with how the language barrier can negatively impact medical care proved to heighten their perceived importance of Spanish in the ER. These stories were so numerous, that a new theme emerged—the ER experience for Spanish-speaking, LEP patients—which will be discussed in a later section.

The Value Placed on Spanish-Speaking, ER Nurses

Another way in which the importance of Spanish in the ER was displayed in the interviews was by the value placed on bilingual nurses. All four DSs were asked, 'How highly do you value Spanish-language skills in ER nurses?' and all four of them answered positively. There were four instances during the interviews in which the value of Spanish-speaking ER nurses was noted. For example, Participant 15, a head nurse, did so by applauding the bilingual nurses they had worked with in the ER: "We've had a couple of Spanish 'duolingual' nurses that were here, and it is so helpful, and I feel like the patients light up too when they have someone that immediately is able to speak their language." In their opinion, such nurses were an asset because they could help both the nurses and the patients communicate with one another. Even though DE participants were not explicitly asked about bilingual nurses, DEs insisted that they wanted to become Spanish-speaking nurses. For example, Participant 44, a nursing student, remarked:

When I get done with this, like, I do want to I'm not trying to be like completely fluent in Spanish, but I am trying to learn enough to, that when we're not we're not like scrambling around to actually have to find a blue phone because those are hard to come by or have to speak Spanish. So, I think that would be a good asset for sure.

Participant 44 believed that speaking Spanish would help them in their future career as an ER nurse.

Even a DI participant, Participant 11, expressed their perceived value of bilingual ER nurses, citing a positive experience in which they had a nurse who spoke some

Spanish:

Muy buena experiencia porque fui...Y había un enfermero que me atendió y las cosas básicas me dijo que él estaba hablando español y sí, me dijo, 'te voy a hacer la temperatura.'

Very good experience because I went...and there was a nurse that tended to me and he said the basic things to me and he was speaking Spanish and yes, he told me 'I am going to take your temperature.'

Participant 11 attributed their positive experience in the ER to this bilingual nurse, indicating a value of bilingualism in ER nurses, suggesting that LEP patients might also hold similar sentiments.

The ER Experience for LEP, Spanish-Speaking Patients

Throughout the interviews, there were 38 personal accounts from DI participants concerning the hospital experience and the care they received. The goal of this section is to offer a sampling of these stories and to get a better idea of what the ER experience is like for a LEP, Spanish-speaking patient. These accounts begin according to the order in which events may happen for a patient, starting with the reason for going to the ER and then continuing with the medical care they received. The discussion of this theme ends with a more in-depth look at a personal anecdote from one of the participants.

Reason for Going to the ER

To understand the ER from the viewpoint of a Spanish-speaking, LEP patient, one must first explore why these patients seek medical help in the first place. Interestingly, the most common reason for going to the ER was childbirth or pregnancy complications. Participant 14 stated, “*he ido cuando tuve mi primer bebe* (I went when I had my first baby).” Sometimes there were reasons for going besides the birth itself as Participant 7 states, “*fue cuando yo estaba en embarazo. Fui por una emergencia de mi bebe* (It was when I was in [my] pregnancy. I went for an emergency for my baby).” Four other participants, a total of six participants, cited complications with pregnancy or birth as the catalyst for receiving help. Some participants followed up after the birth of their baby, going on behalf of their child’s health as Participant 8 says, “I went with my kid, not for me.”

Although birth was the most common reason for Spanish-speaking, LEP patients to seek medical care, there were many other reasons as well. For Participant 17 it was an accident that prompted immediate leave to the ER: “*Recuerdo que estaba trabajando y tuve un accidente y me dolía la espalda* (I remember that I was working, and I had an accident, and I hurt my back).” For other participants, it was simply an unknown illness like Participant 11 who said, “*estaba con mucha temperatura* (I had a high temperature)” or as Participant 3 remembered, “the problem was I just wasn't feeling well.” In one case, the reason for going to the ER and the reason for immigration to the U.S. was the same. Participant 16 said that family friends urged them to come to the U.S. because “*te van a solventar, que alli hay mas tecnologia* (they are going to solve [the medical issue], that there is more technology).” Finally, another reason for going to the ER was to help a friend or family member, primarily to interpret or translate. For

example, Participant 2 explains, “*el enfermo era mi tío y yo estuve ahí como ayudando* (the sick person was my uncle, and I was there helping).” According to the interviews, complications with pregnancy, childbirth, work accidents, illness, or to support a loved one were all reasons that the participants ended up in the ER.

Medical Care

Each DI participant was asked ‘*¿Tu habilidad de hablar el inglés afectó la atención que recibiste?* (Did your ability to speak English affect the attention that you received?) which prompted participants to talk about their medical care. The answer to the question varied greatly, as did the perceived quality of medical care. Some participants insisted that the medical attention that they received was either adequate or very good. For example, Participant 7 described the experience this way:

Pero todo estaba bien con el bueno, la atención como la atención médica. Si, hay muchos doctores que hacen. Buscan la manera de ayudarte.

But all is good with the well, the attention, like, the medical attention. Yes, there are a lot of doctors that do it. They look for a way to help you.

Many such experiences involved healthcare providers that were attentive and willing to take the time to make themselves understood. One way in which this was done was by handing out literature in the patient’s native language. For example, Participant 17 stated that the doctor,

“*me dió un papel así para leer todo lo que tenía yo* (he gave me a paper like this to read all that I had).” Another former LEP patient, Participant 12, had even higher praise for her doctor:

Me atendieron muy bien. Nunca me preguntaron mi estatus migratorio. Nunca me preguntaron. O nunca condicionaron atender a mi hijo, si tuviéramos el dinero o no. Y lo atendieron muy bien. Le hicieron muchos más exámenes de lo que yo pedí.

They tended to me well. They never asked me about my immigration status. They never asked me. Or they never had conditions when tending to my son, if we had the money or not. And they took good care of him. They did more exams than what I asked for.

Usually, positive comments were reserved for the doctors themselves, which is an interesting phenomenon, perhaps having to do with cultural traditions of respect for professionals, but not addressed in the current study.

When talking about the ER nurses, however, the participants were more likely to criticize the care they received. There were several ways in which participants perceived that their medical care was impacted by their limited language proficiency. One such way was that participants believed the nurses treated them more roughly because of their lack of English skills. For example, Participant 16 related in her interview how the nurses had treated her husband when he was admitted to the ER:

Allí las enfermeras lo inclusive, hasta lo marcaron en una de las piernas de lo duro que se vio que le dieron...Se vio un moretón. Como que le hizo así y le quedó la marca.

There the nurses even made a mark on him on one of his legs because of how hard it seemed they poked him... You could see a bruise. It's like he/she did that [thumps leg] to him, and the mark was left on him.

For the most part, participants experienced less traumatic ways in which their medical care suffered. One such common complaint was the amount of waiting time which the former patients endured before they were even attended to. One participant, Participant 11, attributed this wait time to their inability to speak adequate English, a story that will be related in the following section.

Gloria's Personal Anecdote

To conclude this glimpse into a Spanish-speaking, LEP patient's experience in the ER, it will be helpful to present a personal anecdote that one of the participants shared in their own words. Participant 11's account is chosen because of its comprehensiveness and applicability to the themes mentioned previously in this chapter. For sake of narrative continuity, Participant 11 will be referred to by the pseudonym, "Gloria," and the pronoun, "she," throughout the anecdote.

Gloria, like five other participants in the study, arrived at the ER because she was experiencing complications with pregnancy. Gloria was certainly a LEP patient, speaking little to no English and having recently arrived to the U.S.

Cuando estaba embarazada que tuve mi bebe. Fui con muchos dolores y recuerdo que estaba en la, estaba en la ventanilla y llegue ahí. Pues no había una persona que hablara español y pues yo estaba con muchos dolores. Y le pregunto a ella que si alguien hablaba español. Fue eso hace como cuatro años atrás. En realidad, no sabía ni decir 'hola' en inglés. Acababa de llegar a este país.

When I was pregnant, I had my baby. I went with a lot of pain and I remember that I was at the window and I arrived there. Well, there wasn't a person who spoke Spanish, and I was in a lot of pain. And I ask her if anyone spoke Spanish. That was like four years ago. Actually, I didn't even know how to say 'hello' in English. I had just arrived in this country.

Although an interpreter was supposedly asked for, no interpreter was provided, and Gloria felt that she was being overlooked because of her inability to speak the majority language.

Entonces no había nadie y me dejaban en espera. Atendían a otras personas que llegaban y hablaban inglés...Fue horrible para mí, porque aparte de estar con dolores, con síntomas, yo sentía como... tener que esperar porque no me entienden. Y hay otras personas que llegan de emergencia, pero ellos si podían explicar.

Then there was no one and they left me waiting. They catered to other people who came in and spoke English... It was horrible for me, because apart from being in pain, with symptoms, I felt like... [I'm] having to wait because they don't understand me. And there are other people who arrive in an emergency, but they could explain [their symptoms].

After waiting in the waiting room for some time, Gloria was finally called back to triage. Gloria felt that the reason she had to wait so long to be triaged was because she could not adequately express the severity of her condition as other English-speaking patients could.

Entonces, pero a veces uno tiene que estar esperando bastante por cómo no poder explicar bien. Entonces hasta que logran contactar a una persona que viene a que habla español. Entonces es como bastante para uno difícil.

So, but sometimes one has to be waiting too much because they don't know how to explain well. Then until they can contact a person that comes that can speak Spanish. So it is difficult for him/her.

At this point, she had still not been offered an interpreter and she found this both odd and worrisome.

Entonces pues me di cuenta de que yo estoy en un país donde la primera lengua es el inglés y yo tengo que acomodarme, pero si siento la necesidad de que, en

algunos, por lo menos hospitales, pudiesen haber un... por lo menos una persona que... Yo sé que hay intérpretes, pero a veces no hay. Yo no sé. Dicen que deberían haber, pero a veces no hay. No sé.

So, well, I realized that I am in a country where the first language is English and I have to accommodate myself, but I do feel the need that, in some, at least hospitals, there could be a... at least a person who... I know there are interpreters, but sometimes there aren't. I don't know. They say there should be, but sometimes there isn't. I don't know.

While in triage, Gloria was confused about what procedures were being done to her and why because the nurse made no attempts to explain them to her.

Sinceramente, ella ya solo sabe los pasos que van a hacer. Casi no me preguntaban...Me preguntaban cosas y no les entendía. Ellas solo hacían lo que iban a hacer. Entonces como que uno solo se está dejando que hagan lo que van a hacer y es difícil porque no sabes que explicar más.

Honestly, she [the nurse] already knew the steps that they were going to take. She nearly didn't ask me. They asked me things and I didn't understand. They only did what they were going to do. So it's like you're just letting them do what they're going to do and it's difficult because you don't know what else to explain.

Soon she was sent back to the waiting room, this time for five hours, now experiencing a fever in addition to her cramping. A friend accompanying her urged Gloria to inform the nurse of the new development, only to be told that they would need to wait longer.

Entonces me dejaron ahí en espera. En realidad, estuve como cinco horas. Yo tenía mucho frío y la persona que me acompañaba me quería ir a decir que yo estaba muy mal, pero solo le decían que había muchas personas esperando que llegaran antes de mí.

Then they left me there waiting. Actually, I was there like five hours. I was really cold and the person that accompanied me wanted me to go say that I was really feeling bad, but they only said that there were a lot of people waiting that arrived before me.

When six hours went by, Gloria made the decision to leave for the night. When she returned the next morning, the nurses took her temperature which was by this time much lower than before. Gloria was given antibiotics, but she did not feel that enough was done for her condition (which resolved on its own).

Eso fue casi seis horas. Y luego dije 'No, me voy a ir' porque yo no, no veía nada. Cuando, cuando volví... pues no más me dieron antibióticos y mi temperatura un poco alta, pero eso fue todo y ya.

That was like six hours. And later I said ‘No, I’m going to leave’ because I didn’t see anyone. When I returned...well, they didn’t do anything more than give me antibiotics and my temperature was a little high, but this was everything.

According to Gloria, because she could not speak English, she was not triaged immediately and had to wait for a long time in the waiting room. Then once she was in triaging, Gloria did not believe that the nurses tried to explain the procedures they were performing on her or why they were being done, making her confused and worried. After she left triage, Gloria felt that she had to continue to wait for care because she could not explain the immediacy of her complications or the new development with her condition. Then Gloria was not pleased with the care she received as she believed that she needed more than antibiotics, but by this time her condition had improved on its own. Gloria presumably asks for an interpreter but never sees one. Perhaps, she is waiting for one to arrive, but she waits over five hours. Perhaps, she came in on the weekend or at a time when the interpreters were not working in the ER. It is interesting to note that no other efforts were made to communicate with Gloria, such as through the use of an online translator.

As a whole, Gloria’s anecdote is a comprehensive look at what the ER experience was like for many of the other participants of the study. Gloria was scared and confused about her condition, and she endured procedures without knowing why they were being performed. Gloria felt that she was discriminated against for her inability to speak English because of her long wait; however, most significant to Gloria was the fact that she was unable to adequately explain the severity of her symptoms. It is stories like these

that demonstrate both the importance of Spanish in the ER and a typical ER experience for a LEP patient. The third and final theme of this chapter, ‘the desire for language reform in the ER,’ offers suggestions from participants throughout the interviews for lessening the negative impacts of the language barrier and/or improving the ER experience for LEP patients.

The Desire for Language Reform in the ER

The final theme discussed in this chapter is ‘the desire for language reform in the ER.’ The section is divided into the most common suggestions for future reform: the desire for more Spanish-speaking ER nurses and the state of interpretation and translation services in the ER.

The Desire for More Spanish-Speaking, ER Nurses

Previously, the value placed on Spanish-speaking ER nurses has been discussed. In the same vein, there were several instances in which participants exhibited a desire to either become a Spanish-speaking ER nurse or, in the case of former LEP patients, to be tended to by a Spanish-speaking nurse. Many of the healthcare providers demonstrated this desire by expressing interest in taking a Spanish for Nursing course. DS participants were specifically asked ‘Would you encourage ER nurses to take a Spanish for Nursing course?’ All four of the DSs responded in the affirmative, Participant 15 even said “Yes, I would love to myself.” While DEs were not specifically asked about taking a Spanish for Nursing course, several of the nurses and nursing students showed interest in taking Spanish courses related to their field. For instance, Participant 40 stated that they would like to take a “medical interpreting course,” adding that “I think would be really cool to allow nurses to be able to take that.” Later in the interview, Participant 40

enforced this idea again by saying, “I truly believe it should be a mandatory course for nursing.”

Other nurses commented that they would like to learn general Spanish. A nursing student,

Participant 44, said:

When I get done with this, like, I do want to I'm not trying to be like completely fluent in Spanish, but I am trying to learn enough to, that when we're not we're not like scrambling around to actually have to find a blue phone because those are hard to come by or have to speak Spanish. So, I think that would be a good asset for sure.

It is interesting to note that Participant 44 had only been working in the ER setting for a few months, but already saw the need for Spanish in the ER, enough to want to take a Spanish for Nursing course after their education was complete.

DIs, former LEP patients, also expressed a desire for ER nurses to learn Spanish. Participant 11 pointed out that they would like to see more ER nurses make the effort, especially because LEP patients are doing their part to learn English: “*Estoy haciendo el intento para aprender porque tenemos que poner de nuestra parte tambien* (I am making the effort to learn because we have to put in our part too).” Participant 11 added that they are not expecting perfection, only that it would be “*muy bonito* (very nice)” if a nurse could speak Spanish “*por los menos poco* (at least a little).” Participant 2 echoed the sentiment, imagining a healthcare system with ER nurses that knew “*frases muy básicos* (basic phrases)” in Spanish, indicating that speaking Spanish would not only help the patients but also the nurses themselves: “*Les ayudaria mucho a ellos tambien aprender otros idiomas* (It would help them a lot too to learn other

languages).” Therefore, the desire for Spanish-speaking ER nurses seemed to be reciprocal as both healthcare providers and patients offered educating nurses in Spanish as a possible solution for the issue at hand, making a strong case for Spanish for Nursing courses.

The State of Interpretation and Translation Services in the ER

By far the most common responses (37 coded instances) concerning a desire for language reform that participants were centered around how interpretation and/or translation was used in the ER setting. It is important, then, to describe at length the state of interpretation and translation services from the viewpoint of the participants. While some of the DI participants had a level of English proficiency that allowed them to converse minimally with the healthcare providers, the majority did not and many Spanish-speaking, LEP patients may have even less language proficiency in English, especially if they haven’t had the opportunity to study English as the DI participants of this study have. As Participant 11 pointed out, “*en realidad no todas las personas tienen la facilidad de entrar a clases y estudiar* (in reality, not everyone has the ability to take [English] classes and study).” Whatever the case, many LEP patients are forced to rely on interpretation and translation services, and an investigation of these services is warranted. There were three different methods of interpretation/translation cited in the interviews: the ‘iPad method,’ the ‘blue phone method,’ and the ‘real person method.’ The ‘iPad method’ refers to a worldwide service that, facilitated through an iPad or smartphone, immediately connects the user with a remote, real-person interpreter. Participant 6 explained the iPad process their hospital used:

If they do come by themselves and they don't know English, we set them an appointment through an iPad where we get like a, like, I guess someone that's like on call to be like an interpreter. And I don't know exactly how that works. I just know that like they get, they get someone on the iPad to like kind of Face Time the patient with the doctor in that same room to kind of talk.

The 'blue phone method' refers to a landline phone with a double speaker where the healthcare provider talks through one end and the patient through the other as an interpreter on the other line interprets the messages for the respective audience. Participant 14, a former LEP patient, gave this explanation:

Se utilizan como un teléfono azul. Recuerdo que era azul y tenía doble bocina. Entonces ella hablaba por una y yo hablaba por otro. Y era como, era una máquina que traducía o una persona que traducía, pero era a través de un teléfono.

They used, like, a blue phone. I remember that it was blue and had double speakers. So, she talked in one speaker, and I talked in the other. It was, like, it was a machine that translated or a person that translated but through the telephone.

The final method mentioned in the interviews will be called the 'real person method' which involved a bilingual on-site interpreter provided either by the hospital or a family member or

friend brought to the ER by the patient. The process for this method varied greatly since there were so many variables involved.

For each method, patients had both positive and negative remarks. For example, most of the healthcare providers were impressed by the iPad interpretation services used by their hospitals. Others, however, pointed out some flaws. Several healthcare providers pointed out that there was often not enough time to set up the iPad in an emergency situation. Participant 6 stated:

It's like if they if they're in a critical condition, like, it's hard to kind of like set up and just, like, because we can't do anything unless we get the patient's information first. So, it's, like, the patient could be dying while we're waiting for someone to Face Time.

Emergency situations also mean higher stakes, making the need for interpretation immediate, a need that technology is at times slow to address, as Participant 40 explained:

Especially if it's a 'in the moment thing' and you have to stop and rely on a device to load to depend on the internet to work. And this is a life-or-death situation and you're trying to talk through it. It's a lot of steps that you know when every second is critical.

Another healthcare provider, Participant 43, expressed concern that the patient-doctor interaction was hindered by the iPad interpretation service: "And I just feel, like, that the patient interaction

with the doctor and stuff that kind of suffers when you have to go through a translator because it's not as personal.”

The ‘blue phone’ method also received mixed reviews, especially from DI participants. For example, Participant 14 believed that the phone “*funciona muy bien* (works very well)” while Participant 10 said that “*hay que esperar como un cierto tiempo para poder conectar una llamada y poder atenderlo* (you have to wait a certain time to be able to connect a call and be attended to).” A healthcare provider, Participant 24, echoed the sentiment of the patients: “Sometimes it takes a minute to get somebody on our interpreter service.” Another downside to the ‘blue phone’ is that it can be hard to understand. When asked about the understandability of the ‘blue phone,’ Participant 7 said that it was difficult to understand “*a veces* (at times).” They also offered another critique, this time concerning the manners of the interpreter on the other line: “*El intérprete fue un poco grosero y yo colgué la llamada porque ni le estaba entendiendo* (the interpreter was a little rude and I hung up the phone because he wasn’t understanding).”

Although participants generally perceived interpreting via a real person to be superior to the two previous methods, there were several instances mentioned by the DI participants in which the practice of real person interpreting faltered. For example, while some interpreters are licensed and provided by the health facility, at other times the interpreter is not qualified for medical interpreting or translating. It is not uncommon that bilingual doctors and nurses are used as interpreters. Many times, these healthcare professionals are not bilingual, and instead have quite limited proficiency in the second language. For example, Participant 44 remembered a situation in which they called on “one of the other doctors that wasn’t even taking care of the

patient that speaks Spanish to help.” Participant 17 recalled that “*un enfermero que hablaba español un poco* (a nurse that spoke a little Spanish)” helped them understand.

Oftentimes, it is a friend or family member who comes with the patient for the purpose of interpreting. Participant 19 was able to bring their husband to speak on their behalf: “*él [el esposo] estaba así siempre conmigo...es de México, pero habla bien. Habla en inglés* (he [the husband] was always with me...He is from Mexico, but he speaks well. He speaks in English).” Usually, these interactions are viewed positively by the patient as in the case with Participant 3 who says, “good thing I had somebody else there who speaks English.” The positive perception of these situations makes sense since the patient is the one who elects the interpreter. However, sometimes the interpreter is neither a healthcare professional, friend, or family member. Even non-medical personnel can be used as interpreters as in the case with Participant 16 who asked “*un señor que limpiaba* (a man that cleaned)” to help her talk to the doctors. In one case, a healthcare provider, Participant 6, explains about a situation in which a total stranger played the part of interpreter:

Somebody came to the hospital, and this is the same scenario where like, it's the one that doesn't know how to speak English and they just picked someone off the, off the street to come help out, about that is like afterwards, like 10 minutes, [I asked], ‘So you guys are like related?’ ‘No, I don't even know who this guy is.’

Another way in which interpreting situations often fell short was in the interpreter’s lack of time with the patient. There seemed to be a shortage of interpreters; therefore, the interpreter was often used for only a couple of minutes before being used in another capacity. A former

patient, Participant 17, said of the interpreter provided by the hospital, “*un momento estaba ahí como que lo que quería y luego se iba...yo entiendo que están ocupados todos* (One minute he was here like what I wanted and then he left...I understand that they are all busy).” The final area of weaknesses noted in this method had more to do with quality than quantity. Participant 7 remarked:

Porque a veces uno le dice algo al traductor y el traductor traduce lo que quiere, no lo que tú le estas expresando...porque cuando tú le dices al interprete algo, pero tú lo escuchas traducir y estás viendo que el intérprete no está traduciendo lo que tú le estas diciendo, esta como que ‘oye.’

Because sometimes one says something to the translator and the translator translates what they want, not what you are expressing...because when you tell the interpreter something, but you hear what is translated and you are seeing that the interpreter isn’t translating what you are saying, it’s like ‘hey.’

Perhaps, even worse than an interpreter not doing their job was a healthcare provider not using an available interpreter at all. Participant 33, an ER nurse, revealed that they “had to talk to one of the providers before,” saying “you need to make sure you're using the interpreter.” In these cases, valuable and limited interpreter resources go to waste.

A final way in which using interpreters was perceived negatively was that it often hindered interpersonal relationships. Although not coded specifically, there were several instances worth noting in which DE and DS participants mentioned the importance of patient-

nurse interaction to their career. An example was the need for the nurse to calm a patient.

Participant 6 said that they have learned the phrase “calm down” in Spanish for this very reason.

Then they added, making “them [LEP patients] more calm...has a lot of health benefits as well.”

Many healthcare providers seemed frustrated by the inability to have a relationship with the patient such as Participant 43 who said, “you want to help them, but you don't know how.”

Participant 6 echoed this frustration:

It's kind of hard to tell them, like, hey, it's okay. We're here to help you...So, it's like we try our best to, like, help them out, but it's just like because we have that language barrier...we can't socialize.

The patient-nurse relationship was obviously suffering as a result of the language barrier, and the consequences were that nurses couldn't reassure patients that they were there to help. One former patient, Participant 3, even remarked that she wanted nurses to let LEP patients know “we're [nurses] here and we're actually we care about your health just as we care of Americans.” Therefore, there was a disconnect between what the nurses wanted to convey—calmness and care—and the message that the patient received. It was obvious from the examples given throughout the interviews that the interpretation situation (in at least the hospitals within the scope of the study) needed reform.

Healthcare providers offered several ways in which reform could be accomplished. For example, Participant 40 felt that their hospital didn't “have as many resources as they should for this [the Hispanic] population, especially with the different dialects that are spoken.” Participant 40 mentioned:

I've looked into other cities and what they do...They have in-person translators that speak multiple different languages inside the hospital so that you don't have to rely on technology. You have that person right there. And I wish that that is something that was more common.

For Participant 40, a possible solution to the language barrier dilemma would be to hire more interpreters to decrease the need for technological interpreting services. Other participants spoke of reform in their own positions. For instance, Participant 44 wished “we [nurses] knew just basic Spanish to be able to get an interview like a medical history on them.” In their eyes, teaching nurses Spanish would help lessen the negative impacts of the language barrier. It is this final suggestion—teaching Spanish to ER nurses—that will be developed in the following chapter.

The three themes discussed in this chapter set the scene for the need at hand. Participants perceived that Spanish in the ER was important by pointing to the frequency of interaction with Spanish-speaking LEP patients, sharing stories of how the language barrier negatively impacts healthcare, and advocating for more bilingual ER nurses. Throughout the interviews, former patients, such as Participant 11, illustrated the ER experience for the LEP patient, emphasizing confusion, discrimination, and sometimes even tragic misunderstandings. Finally, the healthcare providers and former patients alike expressed a desire for language reform in the ER by underscoring the wish for ER nurses to learn Spanish and illuminating the dismal state of interpretation methods in their city's hospitals. With the need clearly in mind, the next chapter focuses on the final theme elicited by the qualitative data, ‘language used in the ER.’

CHAPTER 6: DISCUSSION

Curricular Priorities

This chapter will address the final and most frequent theme that emerged from the P1 interview protocol (Appendix B), ‘language used in the ER.’ The goal of this chapter is to offer a solution to the needs addressed in the previous chapter in the form of a general syllabus for a TBLT curriculum and suggestions for the design of a Spanish for Emergency Room Nursing course. The first section will review instances in which the participants mentioned language in the ER in order to set up a rationale for the curricular priorities to follow in the subsequent section. This second section will start with an overview of course objectives derived from the quantitative and qualitative data. Then the main objectives, in the form of tasks, to be covered in a Spanish for Emergency Room Nursing course will be introduced. The task ‘assessing a patient’ will be developed further, and a sample pedagogical task sequence will be provided to show how the results from this NA can be used practically in the classroom.

Language Used in the ER

The theme, ‘language used in the ER,’ was the most frequent in the interviews with 146 coded instances. Since it was unlikely to occur in natural conversation, all participants were explicitly asked about language use in the ER. DIs were asked about what aspects of the ER visit caused the most confusion which resulted in the emergent node, ‘areas of linguistic confusion.’ DSs and DEs were asked about language used during tasks in the ER setting which resulted in the nodes, ‘tasks,’ and ‘language use.’ The node that emerged from DI responses will be examined in the first section while the second section will look at the two nodes that emerged

from the responses of DSs and DEs. A third section will address another node that developed, ‘medical terms and phrases.’ Since all types of participants mentioned medical terms and phrases that would be helpful in the ER, the third section will include responses from all types of participants.

The Areas of Linguistic Confusion in Medical Settings

DI participants, Spanish-speaking, LEP former patients, were asked about areas of linguistic confusion that arose during their ER visits, specifically ‘¿*Qué aspectos de la visita a urgencias causaron más confusión debido a la barrera del idioma?* (What aspects of the ER visit caused the most confusion due to language barrier)?’ Most of the 16 coded instances fell into either one of two categories: general conversation or medical terminology. There were several participants, such as Participant 14, who thought that the general conversation with the healthcare providers was the most confusing: “*Creo que fue todo en general, porque fue la conversación.* (I believe that it was everything in general, because it was the conversation.)” Participant 4, an intermediate English language student, thought that general conversation was the most confusing as well: “*Pues yo pienso que la conversación [es lo más difícil], sí.* (Well, I think that the conversation [is the most difficult], yes).”

Other DI participants found that medical terminology was the most difficult to understand such as Participant 2 who said it was “*palabras que uno no está acostumbrado a escuchar* (words that one is not accustomed to hearing)” were the most confusing aspect. Another former patient, Participant 7, remarked on the difference between medical jargon and more commonly used vocabulary:

Yo sé que las personas, o sea, cada carrera, cada cosa que tu estudias, tiene su propio vocabulario. Pero a veces con personas hispanohablantes, utilizar palabras del uso diario también ayuda mucho. Ayuda demasiado para nosotros que no hablamos un buen inglés.

I know that people, or rather, each career, each thing that you study, has its own vocabulary. But sometimes with Spanish-speaking people, using words that are used daily also helps a lot. It helps so much for us that don't speak English well.

Participant 7 remarked that ER nurses used these medical terms often, leaving them to ask "*¿Qué es eso?* (What is that)?"

Three participants attributed the most linguistic confusion neither to general conversation nor medical terminology. For example, Participant 3 and Participant 7, insisted that the language about the process itself was the most difficult to understand. Participant 3, an advanced English language student at the time of the study, said the following:

I didn't understand what they were doing, even though I you know, I had confidence that they knew what they were doing. And I know they are very prepared here and they're just not playing around. Right. But I didn't understand, like, what was happening. Like the process. Why did I have to take blood samples so many times? Like on those kinds of things. I was so confused during the process.

Participant 7 agreed with Participant 3 stating “*cuando ellos te dicen cual es el proceso a seguir* (when they tell you what process is going to happen)” was the most difficult part to understand. They gave an example in which they went to the emergency room and the doctor was trying to explain that they would need surgery. They didn’t know what was going on, but they could understand that “*problemente era una cirugia* (probably it is a surgery).” On the other hand, Participant 8, an advanced English language student at the time of the study, felt that it was the directions nurses gave that were the most confusing:

Some directions. Where to go? Because I went to the main entrance, I didn't find some like direction where to go in case that is for child where I have to go like I didn't find it. But some people told me when I, where I have to go.

From the interviews with DIs, it was observed that general conversation, medical terminology, processes, and directions were the aspects of the ER experience that caused the most linguistic confusion for LEP former patients. However, it should be noted that it is possible the actions of the ER nurses were conflated with their language when DIs perceived difficulty. For example, procedures that may seem foreign or complex to the participant could cause the participant to perceive the language used during the procedure the same way. Furthermore, the present study did not look at specific aspects of language. For example, Participant 4, along with three other participants, mentioned that part of the difficulty lied in the fact that the nurses talked “*muy rápido* (very quickly).” Therefore, it seemed that it was not only the content of what was said that caused confusion, but also the way it was spoken.

Tasks and Language Use in the ER

DSs and DEs were asked about tasks performed in an ER setting, specifically which language skills were necessary (reading, listening, speaking, writing). The question was a bit odd for the participants, and they often had to clarify what was being asked of them; thinking of their daily jobs in terms of language use seemed unnatural for them. Nevertheless, there were 35 coded instances in which participants mentioned tasks and 53 coded instances in which participants spoke about language used in those tasks. Anytime a task was mentioned it was coded and then coded again according to language skill. For the purpose of clarity, the tasks are presented according to language skill. It is important to note that the list of tasks presented here is far from exhaustive, but simply provides a few key examples given by participants during the interview process. Also, there are many times that there is an overlap between language skills during a task, specifically for speaking and listening.

Reading

There were relatively few coded instances (6) of reading for tasks. In fact, Participant 6 stated, “I don't think there's been ever a time where we have to write or read in Spanish.” However, one situation that might require a ER nurse to read Spanish that arose during the interviews was patient documentation. For example, Participant 33 mentioned that “giving meds” could “possibly be reading, but mostly speaking and listening.” When encouraged to explain further, they said some patients “come with like a sheet from home or whatever” with the medications that they take, but they added, “most of the medications are in English anyway.” Participant 33 also stated that triaging a patient could require reading if “they come in like with something from their doctor that's in Spanish or something like that.” Participant 40 mentioned

other documentation besides medication lists or doctor's orders a patient might come in with such as personal identification documents or patient histories:

Whatever documentation they have. If they come in with a passport, you know their birth dates and things like that will be written out differently than the standard American licenses and things, and they may have their actual history written out. And that may be in Spanish.

Participants also mentioned reading documents that a patient receives during their time in the ER. For example, Participant 44 said that consent forms and "medical advice paperwork" could be given to patients in Spanish. According to the participant, this information was by law provided in the patient's native language: "We have all those forms, those legality forms written in Spanish." However, they added, "if you can't speak it, you don't understand what it's saying." There was a discrepancy between this response and another advanced nursing student who claimed that these documents included the English translation, meaning that nurses would not need to read them in Spanish. Participant 6 explained:

I don't think there's anything that we have to read any documents because most of the documents they have are in English. The medications are in English or like they have like they have it in Spanish, but underneath it's like an English...So far I've never ran into somebody that had like a document that was like completely in Spanish.

This discrepancy may exist because the protocol for printing these forms varies from one hospital to the next as the disagreeing participants were from different contexts.

The only other instance in which a participant mentioned reading during one of their daily tasks was during registration of a patient. According to Participant 40, who regularly worked at the sign-in desk, a patient may write their information in Spanish on the sign-up sheet:

Participant 40: When the Spanish speaking patients sign in. They, if they do not know any English, of course they will write their registration information in Spanish.

Researcher: Okay. And that information is like name? What kind of things?

Participant 40: Yeah. Name, birthdate, their address, what they're coming in for. What brings them to the to the E.R.

There was an overlap here with the previous example about patient documentation in that personal identifying information such as name and birthdate could be on passports and licenses as well. Nevertheless, it was obvious from the lack of examples (only two participants could provide reading tasks) that reading Spanish is not a skill used often in the ER.

Writing

There were even fewer instances (4) coded for writing in the ER. Both Participant 6 and Participant 15 insisted that they would not need to write in Spanish in the ER for any reason. However, even though Participant 15 said, “I probably wouldn’t have to write in Spanish,” they mentioned a time in which they may have to jot down information such as the patient’s “chief

complaint” on the check-in sheet. Participant 40 agreed that writing could be a part of the registration process as well, but only in certain circumstances. Usually, they stated, “we would print things in Spanish documents,” and as Participant 6 pointed out, “they just automatically translate in Spanish.” However, according to Participant 40, there may be times in which “you don’t have access to a computer” and “you may need to write down what they’re saying or any information that they’re giving you.” It seems from the interviews that it is highly unlikely that an ER nurse would ever need to write in Spanish.

Listening

By far, the most examples of language used in the ER required listening and speaking. For listening, there were 16 instances coded during the interviews. The examples provided by DS and DE participants were so numerous, that they cannot logistically be listed here. Nevertheless, there were a few examples that stood out that will offer a glimpse into how listening is used in the ER, often right alongside speaking which will be detailed in the subsequent section. The most oft-mentioned examples of listening tasks in the ER were during procedures, when obtaining vitals, and in triaging. Most of these examples involved either listening to a patient’s response to a question from a healthcare provider or listening to a question that the patient posed himself. In the case of triaging however, a healthcare provider would need to listen to long narratives about a patient’s history, their symptoms, etc.

A plethora of examples of listening when performing procedures arose throughout the interviews. Two participants mentioned that giving medications would require listening to the patient. For example, Participant 43 explained that they would need to listen to answers to questions about the medication such as “if they’re allergic to any medication.” Several other

procedures were mentioned by Participant 33 (catheter placement, cleaning a patient, listening with a stethoscope) in which the healthcare provider would need to listen to the patient in order to either correctly perform the procedure or to answer questions about the procedure being performed. Participant 43 provided additional examples of listening to the patient during procedures such as restraining a patient, placing an IV, and taking a patient to a procedure. Participant 44 gave a specific example of listening when performing an EKG on a participant:

For that I would also say that would need to be listening and speaking too because when you're coming at somebody with a bunch of wires, even people that do speak English and you're explaining to them what you're doing, they all still be like, "Oh, does that shock me?"

For procedures and obtaining vitals, there were predetermined questions that the nurses might ask and a limited variety of responses that could be given. But in some cases, such as the example above, a patient might offer up a question themselves or information that was not elicited. Another instance in which a patient may ask an unforeseen question is during discharge when a patient is given their discharge papers or other educational paperwork and, as Participant 24 pointed out, the healthcare provider would need to “answer any of your questions.” Listening would obviously be harder in these situations since the patient would not be responding simply “yes” or “no” to a question, but would be uttering creative, lengthy responses.

For obtaining vitals, two participants (Participant 24 and Participant 33) explained how they need to listen to special requests from the patient. For example, Participant 24 mentioned that “we can’t take blood pressures on certain arms because they’re on dialysis, so I would need

to listen to them say, ‘Hey, you can’t use my left arm.’” Three participants mentioned that triaging patients would require listening skills, as Participant 24 put it, “to try and figure out what’s going on with them.” Triage would be another example in which a patient may offer unexpected utterances that a nurse would need to listen to and comprehend. Participant 40 said that during triaging they would have to listen to “the entire patient history and what brought them into the ER.” Participant 6 explained the triage process and how listening would be necessary:

Participant 6: So, I work in triage and that’s like that’s what everybody comes to first. And how triage works is that like we figure out what we need to do and to see to determine whether this is a dangerous thing or is this just something that’s like that you just ‘here’s, here’s a bag of fluids; you could just go home,’ right? We usually ask a question first and then they respond like they don’t come in and just tell you everything that they need to say. We tell them like, ‘Hey, have you done this?’ ‘Have you been smoking?’ You know, we usually ask the questions first and then they respond.

Researcher: So, you do more of the talking than they do?

Participant 6: Yeah, we do. We do...because they don’t know what to tell us, you know because we have information. We need the information that we need to know before we do any kind of treatment. So, it’s like we always do the talking first. Especially when they don’t know Spanish or English like they don’t really talk that much to begin with...We have to be the one engaging it.

It was obvious that Participant 6 felt that more often than not, ER nurses would ask the questions first and then listen to the response of the patient, especially when the patient spoke limited English. The participants also felt that they did more speaking than listening, which is the final language skill to be discussed in this section.

Speaking

There were more instances (27) of speaking than any other language skill. There was an overlap between many of the listening examples above as many participants grouped these two skills together when giving examples. Usually, speaking preceded listening with the healthcare provider engaging the patient in conversation first. The most common example of speaking was when a nurse was explaining a procedure to a patient. Participant 40 summarized it well:

I guess the best way I can explain it is that every time you touch the patient, every time you do anything to the patient, you have to say what you're doing. So, every step of the way of their visit is a conversation. So, you would have, you would need to be able to explain to them what is happening throughout their care.

Participants offered many of the same procedures as before (placing an IV, inserting a catheter, and cleaning a patient) when asked about listening. For example, Participant 24 mentioned vital signs again and how they would need to explain taking blood pressure. Participant 44 added more specifically that they would need to give verbal commands during vitals to tell them to “sit super still” when taking their blood pressure and “tell them to put the thermometer up underneath their tongue” when taking their temperature. Giving medication was also mentioned previously

by Participant 43 for listening, but this time they emphasized that they would need to tell the patient about side effects of the medication or how to take the medication. Triaging was also brought up again by Participant 24 who said that it required “primarily listening to try and figure out what's going on with them, but also speaking to kind of dig further into their complaint.” Participant 40 added, “and you'd have to have back and forth dialogue to get through the assessment.” Discharging a patient was repeated by Participant 24 with an emphasis on “speaking back to them” what is written on the discharge paperwork.

Participant 40 offered a new task that would require speaking, talking to family members about the patient’s condition because if a patient was incapacitated, “you would need to be able to explain what is happening to the family.” Only one task was mentioned that required more speaking than listening. Participant 24 said that “getting lab work” required more speaking than listening because “I’m having to explain they’re about to have a needle in their arm,” indicating that perhaps the invasiveness of the procedure has bearing on the degree of speaking or explanation involved during the procedure. For example, Participant 43 provided an example of speaking when restraining a patient which is highly invasive and would require you to tell them not only “what you're doing” but also “why you're doing it.” If this theory were correct, then there would be certain procedures and situations that could be anticipated to have more questions from the patient and more need for explanation from the healthcare provider, thus requiring more speaking and listening skills. Only one task was provided that required speaking without listening. Participant 43 said that feeding a patient would “probably only be speaking,” but there was no more follow-up on why the participant felt that speaking did not accompany listening in this situation.

Medical Terms and Phrases

Although not directly elicited by the interview protocol, there were many instances (42) in which both healthcare providers and former patients offered specific examples of medical terms and/or phrases that they thought would be important to know in the ER setting. DI participants had strong opinions about what they thought nurses should learn in Spanish, and perhaps surprisingly, their suggestions were often mirrored by the responses from DS and DE participants. One suggestion by former LEP patient, Participant 14, was not mentioned by any other participant. Participant 14 explained a situation where they were confused because they did not understand a nurse's command to lift their right foot:

Como las partes del cuerpo. Si, porque me decían cuando me pusieron la inyección me decían como 'levanta el pie derecho.' Entonces como yo decía '¿qué dice?'

Like body parts. Yes, because they told me when they were giving me the injection, they told me to like 'lift my right foot.' Then I was like 'what did they say?'

There were also some terms and phrases so specific and individualized that they were not repeated instances such as “cuántos días lleva con contracciones (how many days have you had contractions)” which Participant 14 mentioned in regard to her pregnancy complications, or as they put it “en mi caso (in my case).”

Many of the medical terms and phrases mentioned by the participants were in question format. Participant 10 offered several, in their words, “key questions:”

Yo creo que esa es la pregunta clave, tal vez de un enfermero o de un doctor, “¿qué te duele”? Por ejemplo, si tiene un dolor o por lo menos eso yo siento que es muy, muy importante que puedan preguntar esa palabra.

I believe that that is the key question, perhaps for a nurse or a doctor, ‘what is hurting?’ For example, if you have a pain at least that I think it is very, very important that they can ask that.

Participant 10 also provided other questions that were similar to ‘what is hurting’ such as “*cómo siente* (how do you feel),” “*estás bien* (are you well),” and “*como te ha ido hoy* (how have you been today)” which all pointed to building rapport with a patient. While questions from DIs were usually general, DSs and DEs provided more specific questions that they used on a day-to-day basis in their job. Participant 43 said: “I like to ask questions like, ‘where do they usually give you a hard stick,’ ‘do needles bother you?’” Participant 6 added even more questions that stemmed from the main question "what are you feeling and why;" "is it [the pain] like a stabbing pain;" "is it [the pain] something that's just kind of numbing;" and "does it feel like you have someone sitting on you?" Participant 6 also shared two acronyms that they use in triaging to ask predetermined questions about the patients’ condition which are provided below.

SAMPLE

S—signs and symptoms (What kind of symptoms are you feeling?)

A—allergies (Do you have allergies?)

M—medications (What medications do you take?)

P—past pertinent histories (Have you had similar symptoms in the past?)

L—last thing you ate (What is the last thing that you ate?)

E—event(s) leading up (What happened right before you started feeling this way?)

OPQRST

O—onset (When did the pain start?)

P—provocation retaliation (What makes the pain better?)

Q—quality (What kind of pain are you feeling?)

R—radiation (Is the pain spreading?)

S—severity (How bad is the pain?)

T—time (Has it been getting worse?)

One question that two DIs and a DE mentioned was ‘¿*Qué nivel de dolor tienes del uno al diez?* (What level of pain do you have one to ten?)’ DI participant, Participant 10, claimed that this question “*es la palabra clave* (is the key phrase).” Participant 6, an advanced nursing student who worked in an ER setting as an extern, verified that this was a question they used in their job using a “scale of one to ten” to rate pain. In the same vein, Participant 14 insisted that nurses need to know “*cómo aprender los números* (how to learn numbers).” Similar is the need to

understand units used outside the U.S. such as kilograms for weight and Celsius for temperature.

Participant 12, a DI, pointed out this difference:

Sabes que se hace como complicado, cuando te pesan, cuando te miden, porque lo de nosotros es el kilogramo y aquí es libras...Nosotros usamos grados centígrados. Aquí es... Ay como Fahrenheit, ¿no? Entonces, así como que es complicado la temperatura.

Did you know that it makes it a little complicated when you measure, when you weigh, because for us it is kilogram and here it is pounds. We use centigrade.

Here it is...Uh like Fahrenheit, no? Then that's how temperature is complicated.

In this case, the language barrier involved more than just the difference between English and Spanish, but also a difference between systems and standards of units.

Apart from questions, participants offered examples of commands that they witnessed or used in the ER setting. A former patient, Participant 7, gave several examples of commands he remembered in English from his ER experience such as “follow me,” “take a pill,” and “stay here.” Healthcare providers offered more sophisticated commands, demonstrating perhaps the disconnect between what is said and what is heard by the patient, or that healthcare providers use simplified language when speaking to LEP patients. Participant 6 provided a variety of commands they used on a daily basis in their job:

Just simple like kind of like commands. Like, 'come over here.' If we have to do an EKG, we have to tell them to take their clothes off. So just stuff like that because I don't know, like I don't know how to hand gesture. Yeah, you know, I think it would be kind of weird. Just simple for me, simple commands and stuff like, 'hey, this is going to hurt'... 'wait', you know?... We do ask for urine samples, too. So that's like, " pee in this cup." [It] would be a common command that we say a lot... Yeah, the thermometer. We have to tell them to open their mouth... And tell them like, 'hey, don't move your leg no matter what.' 'Keep this still and let us know if something happened'... 'Let us know is something is happening' is something that we say a lot, too.

These commands that were provided range in importance. For instance, if the command "follow me" was misunderstood, it would most likely have little bearing on the patient's health; however, if "hey don't move your leg no matter what" was misunderstood, a truly negative outcome could arise, indicating that there could be commands that are more important to learn than others.

Despite the fact that many healthcare providers said that listening and speaking were used when explaining procedures, very few specific examples were provided from either the healthcare providers or former patients. Only one participant, Participant 24, gave examples of specific phrases they would use when explaining procedures: "I need to get your blood pressure and your temperature," "I'm going to put this probe on your finger to get your oxygen level", and "the blood pressure might squeeze your arm a little bit, but it will release eventually." These phrases served the dual purpose of explaining a procedure and calming the patient. The latter

purpose was mentioned by a former patient and advanced English language student, Participant 8:

I have been many times in hospitals because of the pregnant. So, I saw many doctors speak in Spanish with him try to say words in Spanish, and he feels better when the doctors ask, 'como siente?' And some doctor tell to him, 'vas a estar bien.' Like words like to feel very comfortable with the especially with him that he's a kid. And this is very short words that you can say 'vas a estar bien.' Many times they say to him in Spanish and he, I look that he feels better and they say in the same language.

In this case, the healthcare provider was able to comfort the patient's son because he knew a couple of phrases in Spanish to assure him that he was going to be okay. Throughout the interviews, it was observed that phrases that validated, assured, or comforted the patient were important to DI participants.

There were a couple of isolated words and phrases that DI participants mentioned would be helpful for ER nurses to know in Spanish. For example, Participant 1 mentioned several medical terms: "*antibióticos* (antibiotics), *alérgico* (allergic), *dolor* (pain), *síntoma* (symptom)." Participant 1 added, "*debería de tenerlas ese tipo de palabras* (they should have these type of words)" because "*seria buenísimo que la estuviesen para poder comunicar con ellos [los pacientes quien no habla el inglés] en lo básico por lo menos* (it would be great if they could communicate with them [the patients that don't speak English] in a basic sense at least)." Perhaps the issue was less about knowing complicated medical vocabulary, and more about the

fact that they were even used. Participant 7 made a suggestion concerning the amount of low frequency words used in the ER setting:

Yo sé que las personas, o sea, cada carrera, cada cosa que tu estudias, tiene su propio vocabulario. Pero a veces con personas hispanohablantes, utilizar palabras del uso diario también ayuda mucho. Utilizar palabras del uso diario ayuda demasiado para nosotros que no hablamos un buen inglés.

I know that people, or rather, every career, each thing that you study, has its own vocabulary. But sometimes with Spanish-speaking people, using words that are used daily could also help a lot. Using words that are used daily helps us that don't speak English well so much.

Of course, this suggestion to use more high frequency words is not limited to only LEP patient interactions but to all patient populations; however, it can be even more helpful for English language learners.

Summary of Quantitative Results

Before proposing a task-based syllabus and offering recommendations for course design, it will be helpful to summarize the quantitative results of this NA detailed in Chapter 4, specifically the evolution of the task lists that resulted at the end of each phase of research. At the end of Phase 1, a list of 127 tasks was generated from responses that DSs and DEs gave for the open-ended item on the P1 Questionnaire (Appendix A). The researcher created 19 category

tasks (CTs) and placed the participants' responses as subtasks (STs) under their respective CT. In Phase 2, participants were asked to rank the CTs based on frequency and importance and verify the placement of the STs. CTs were given an overall score out of eight by adding their values for frequency and importance. In Phase 3, participants participated in interviews in which they refined the task list and the CT ranking. A majority of participants agreed that 'assessing a patient's condition' should be moved to the second place on the list because of the perceived frequency and importance of the CT. The final ranking of CTs is listed below in Table 12. These findings, along with the qualitative results discussed above, were used to determine curricular priorities for a Spanish for Nursing course.

Table 12

Category Task Ranking According to Both Frequency and Importance

Category Task	Frequency	Importance	Overall
Obtaining a patient's vital signs	4	4	8
Assessing a patient's condition	4 (3.73)	4	8
Administering medications and/or treatments to a patient	4	3.91	7.91
Inserting and/or placing lines and/or tubes in a patient	3.91	3.91	7.82
Documenting assessments or charting a patient's condition	3.82	3.91	7.73
Monitoring a patient's condition	3.82	3.91	
Managing a patient's condition	3.73	4	7.73
Assessing a patient's condition	3.73	4	7.73
Collecting lab specimens from a patient	3.82	3.73	7.55
Educating a patient or a patient's family	3.91	3.55	7.46
Performing medical procedures and/or treatments to/on a patient	3.64	3.73	7.37
Assisting with medical procedures and/or treatments to/on a patient	3.64	3.64	7.28
Providing general care for a patient	3.64	3.64	7.28

Table 12 (Continued)

Category Task Ranking According to Both Frequency and Importance

Category Task	Frequency	Importance	Overall
Transporting or physically handling a patient	3.82	3.45	7.27
Managing a patient's medications	3.55	3.64	7.19
Caring for a patient's hygiene and/or comfort	3.73	3.45	7.18
Performing diagnostic medical procedures and/or treatments performed to/on a patient	3.09	3.82	6.91
Inserting and/or placing a catheter in a patient	3.18	3.18	6.36
Following up with a patient	3.18	3.09	6.27
Feeding a patient	2.82	2.91	5.73

Spanish for Emergency Room Nursing Course Design

This final section of this chapter will review the four course objectives that stem from the quantitative and qualitative results of this study, present a general outline and suggested order of topics to be used in a TBLT curriculum, and offer additional suggestions for the design of a Spanish for Emergency Room Nursing course. An example pedagogical task sequence will be given for the second target task ‘assessing a patient’ to demonstrate how the results of the NA can be used practically in the classroom. This section will conclude with a summary of additional course suggestions derived from the qualitative findings discussed in the previous section.

Overview of Course Objectives

There are four task-based objectives derived from the results of the NA to be used for a task-based Spanish for Emergency Room Nursing course. At the end of a Spanish for Emergency Room Nursing course, learners will be able to use Spanish to: 1) obtain a patient’s vitals 2) assess a patient’s condition 3) administer medication and/or treatments to/on a patient and 4)

build rapport with a LEP patient. These objectives are based on tasks that act as the center focus of the course and can be used to organize the course into units, chapters, etc. Each of these objectives can be used to create a sequence of pedagogical tasks. Each pedagogical task also has a task objective and a language focus to help the learner successfully complete the task, as demonstrated in the sample pedagogical task sequence in a later section.

The first three objectives are for the learners to successfully perform real-world tasks frequently performed and important in the ER setting. These objectives come directly from three tasks: ‘obtaining a patient’s vital signs,’ ‘assessing a patient,’ and ‘administering medications and/or treatments to/on a patient.’ The three tasks were chosen because they were deemed the most frequent and important according to the results of the NA, specifically the responses from DSs and DEs on the P1 and P2 questionnaires. The fourth and final objective— ‘use Spanish to build rapport with the LEP patient’—is derived from the qualitative data collected during the NA, specifically the observation throughout the interviews that DI participants needed to be validated that their health mattered and that DS and DE participants exhibited a desire to develop interpersonal relationships with LEP patients. This final objective will be placed last in the order of objectives to be covered because the justification of its inclusion is based solely on qualitative results and intuition of the researcher.

Only these four objectives were chosen because, for most situations, the material to be covered in these four tasks is substantial enough to be considered in a single course; however, the same processes explained in creating a syllabus and task sequence can be applied to the other tasks on the ranking list. Because these tasks are target tasks and not specific enough to be used in the classroom, each target task must be broken down into type tasks and then pedagogical tasks, a process which will be outlined later in the chapter. Success of the tasks is determined by

completion of the task; however, the task sequence is designed to build various language competencies that once mastered will help the learners achieve the task outcome. The following section will present the language focuses deemed salient by the research for the course at hand.

Language Focuses

It was apparent when reviewing the language skills used in the ER that a special emphasis should be placed on speaking and listening in a Spanish for Emergency Room Nursing course, especially if time is a concern. If including reading, instruction should focus on the differences between Spanish and English in regard to names and birthdates. Writing is very uncommon in the ER setting, and therefore, should not be a priority in this type of course. Speaking and listening seemed to nearly always go hand in hand, usually with the healthcare provider initiating questions for the patient to answer. As a result, dialogues and tasks that simulate a back-and-forth answer-question style conversation would be beneficial. There were cases in which patients formulated creative responses such as when they were describing their symptoms or relaying their patient history. Listening comprehension of these types of utterances would be much more difficult to replicate in the classroom and would require vast amounts of vocabulary knowledge and use of more complex grammar constructions such as the past tense. Nevertheless, it would be helpful to focus on target vocabulary which is discussed in some detail in the form of medical terms and phrases mentioned by participants.

From the instances where patients offered suggestions and/or terms and phrases that ER nurses might need to know in Spanish for an ER setting, it can be safely deduced that questions and commands were the most common structures used. Questions were most commonly used in triaging or understanding the patient's condition and symptoms whereas commands were used

during procedures and could range in importance. Since nurses seem to engage patients with questions first and then patients answer those questions, it might be beneficial for nurses to learn a set of predetermined questions in Spanish (such as used in the acronyms provided by Participant 6 and presented earlier in this chapter). For commands, there are some commands that proved to be more likely to negatively impact a patient's health and could therefore be prioritized to be learned first. It seemed important to patients that ER nurses knew enough Spanish to explain procedures and to comfort them. While complicated medical terminology might be helpful for ER nurses to know, it also seemed that patients wanted ER nurses to use more high frequency words that they would be more likely to know themselves in either language.

Syllabus

The syllabus for the Spanish for Emergency Room Nursing course is a task-based syllabus based on recommendations by Long (2015). In Long's process, the NA determines target tasks that are subsequently broken down into type tasks that are used to create pedagogical task sequences. As mentioned previously, the central tasks of the course come directly from the four objectives which are to use Spanish to: 1) obtain a patient's vital signs 2) assess a patient's condition 3) administer medications and/or treatments to a patient 4) build rapport with a LEP patient. The justification for these objectives and their respective tasks as well as the order in which the tasks are taught is discussed in the overview of course objectives. Each target task is broken down into various type tasks that, in the case of the first three tasks, were derived from the original STs. For the final task, type tasks were created by the research from the coded examples in the qualitative data. The outline of target tasks and type tasks can be found in Table

13. For the second target task— ‘assessing a patient’—, the type task, ‘assessing pain,’ will be discussed in more detail. A sample pedagogical task sequence is given to show how the findings of this NA can be used in a curricular plan.

Table 13

Outline of Target Tasks and Type Tasks

Target Task	Type Task
Obtaining a Patient’s Vital Signs	<ul style="list-style-type: none"> Obtaining a patient’s heart rate Obtaining a patient’s respiratory rate Obtaining a patient’s oxygen saturation Taking a patient’s blood pressure Taking a patient’s temperature
Assessing a Patient's Condition	<ul style="list-style-type: none"> Triaging Assessing pain Performing a primary assessment Performing a head-to-toe assessment Assessing a skin condition Assessing wounds Performing a NIH exam or a neurological exam
Administering Medications and/or Treatments to/on a Patient	<ul style="list-style-type: none"> Giving shots Administering eye drops Administering ear drops Administering blood and or blood products Administering TPA (blood thinner) Administering oxygen using a simple mask, non-rebreather, or BVM Applying dressings Applying slings and casts Administering nebulizer treatments Applying steri-strips
Building Rapport with a Patient	

Table 13 (Continued)

Outline of Target Tasks and Type Tasks

Target Task	Type Task
	Using calming/reassuring phrases
	Expressing concern for the patient's health
	Validating the patient's symptoms

An Example Pedagogical Task Sequence

The target task ‘assessing a patient’s condition’ is further developed here in order to show a concrete example of how to apply the findings of this NA to a course. Specifically, a task sequence is provided for the type task ‘assessing pain,’ a ST verified by the DS and DE participants. The process (see Long 2015) involves breaking down the type task into task outcomes with increasing difficulty. Then for each task outcome, a sample pedagogical task is created to help learners achieve the respective task outcome. Each pedagogical task has a language focus that builds competencies to help the learner complete the real-world task of assessing a patient’s pain in an ER setting. The pedagogical task sequence with its specific course objective, task outcomes, language focuses, and individual task descriptions are provided in Table 14. This provides an example of how the findings of this NA could be applied to a task-based curricular design. Similar pedagogical tasks can be created for the remaining real-world tasks derived from this NA (Table 12; Appendix E).

The objective of the first task in the sequence is for learners to identify the general area where a patient may be experiencing pain. The pedagogic task would be a full class listening task in which each student would listen to a simplified conversation between a patient and a nurse about pain. The learner would mark on an outline of a body the general area of the pain. The objectives for the tasks grow increasingly difficult. For example, the second pedagogic task

would require the learners to mark the *specific* body part in which the patient is experiencing pain, and so on. The final goal of the task sequence is for the learner to participate in a simulation of a patient-nurse interaction. The corresponding pedagogical exit task would require the learner to ask the patient three predetermined pain assessment questions. Success of the task would be assessed by whether the learner correctly assessed the patient’s pain.

Table 14

Sample Pedagogic Task Sequence for ‘Assessing Pain’

Course Objective	Language Focus	Task Outcome	Task Description
Use Spanish to assess a patient’s condition	Body part vocab	Identify the general area where the patient is experiencing pain (head, chest, back, abdomen, limbs)	Full class listening task. Each student has a sheet with an outline of a body. They listen to a simplified conversational exchange between a patient and nurse discussing pain and mark the <i>general</i> site of pain on the sheet.
“”		Identify the specific body part where the patient is experiencing pain (head, neck, arms, legs, stomach, chest, etc.)	Full class listening task. Each student has a sheet with an outline of a body. They listen to a simplified conversational exchange between a patient and nurse discussing pain and mark the <i>specific</i> site of pain on the sheet
“”	Body part vocab; numbers vocab; question structure	Identify the specific body part where the patient is experiencing pain and rate the pain on a scale of 1-10	Partner information gap task. Each student has a different picture of a body with the pain level number on the specific site of the pain. Each student must circle their partners’ pain level on a pain level scale and indicate on a blank body where the partner is experiencing pain.

Table 14 (Continued)

Sample Pedagogical Task

Course Objective	Language Focus	Task Outcome	Task Description
“”	Body part vocab; number vocab; high frequency vocab to describe pain; question structure	Identify the specific body part where the patient is experiencing pain, rate the pain on a scale of 1-10, and determine what kind of pain the patient is experiencing (throbbing, aching, stabbing)	Partner information gap task. Each student has a different picture of a body with the pain level number on the specific site of the pain and <i>what kind of pain the patient is experiencing</i> . Each student must circle their partners’ pain level on a pain level scale and indicate on a blank body where the partner is experiencing pain. Then they must ask their partner what kind of pain they are experiencing from a list of choices and indicate this on their sheet.
“”	Body vocab; numbers vocab; question structure high frequency vocab to describe pain	Role play	Partner role play. One student plays the role of a nurse and asks another student who is role playing as the patient where they are experiencing pain, the pain level, and what kind of pain they are experiencing. Then students switch roles.
“”	Body vocab; numbers vocab; question structure; high frequency vocab to describe pain	Exit Task: Full simulation of assessing pain	Individual simulation task. Teacher acts out the role of the patient while student acts out the role of the nurse by assessing the patient’s pain (specific site, pain level, and kind of pain). Teacher assesses whether the student correctly asks and responds correctly to each of the three questions.

Curricular Recommendations

Both the quantitative results and emergent themes of the NA have informed the course objectives, language focuses, general syllabus, and sample pedagogical task sequence discussed in this section. The quantitative results revealed which tasks were the most frequent and important according to the various stakeholders. The resulting task list was used to decide which topics were to be covered in a Spanish for Emergency Room Nursing course and to create a general syllabus. Three of the most frequent and important tasks were chosen and developed into a task sequence complete with task outcomes and sample pedagogical tasks to demonstrate how such a sequence can build competencies for learners to complete the respective real-world task. An additional course objective was derived from the most frequent themes emerging from the study. Interviews with participants indicated that ER nurses desired to develop interpersonal relationships with the patients and that LEP patients desired validation. The theme ‘language in the ER’ revealed that speaking and listening were the most common language skills used in the ER, that questions and commands were the most common linguistic structures, and that nurses should use more high frequency words. These findings were used in the form of language focuses. Therefore, this chapter demonstrated how the sum of the quantitative and qualitative results from the NA can be used in a TBLT curriculum.

CHAPTER 7: CONCLUSION

This final chapter will conclude the dissertation by first returning to the original research question: What are the Spanish language needs, in terms of tasks, of non-Spanish-speaking, English-speaking Emergency Room (ER) nurses in hospitals in the Southeastern U.S. as reported by ER managers, head nurses, and nursing faculty; ER nurses and advanced nursing students; and Spanish-speaking, Limited English Proficiency (LEP) patients? First, both the quantitative and qualitative findings from the NA will be summarized. Then subsequent sections will introduce implications and review limitations of the present study. Finally, recommendations for future research and possible contributions of the study will be presented.

Summary of Findings

Throughout three phases of research, quantitative and qualitative data was gathered. Quantitative data in the form of questionnaire responses demonstrated which real-world tasks were performed in an ER setting. These tasks were grouped into larger task categories and presented again to participants to rank in both frequency and importance. Through a form of member checking, participants also verified the categorization of tasks created by the researcher. The result of this questionnaire was a ranking of category tasks (CTs) and subtasks (STs). Member checking was used again as this list was further refined during interviews with participants. Qualitative data came from semi-structured interviews with the three participant types about their experiences in the ER as either patients or healthcare providers. These interviews were transcribed and then coded according to emerging themes discovered by the

researcher. Frequency of coded instances for each of these themes was calculated to determine the most salient topics.

From the quantitative data it was determined that ‘obtaining a patient’s vitals,’ ‘assessing a patient,’ and ‘administering medications and/or treatments to/on a patient’ were the most frequent and important tasks performed in an ER setting. The qualitative data indicated that the task, ‘building rapport with a patient,’ was a salient theme throughout the interviews. The findings also revealed several linguistic trends for ER settings: speaking and listening were the most commonly used language skills; questions and commands were the most commonly used linguistic structures; and high frequency vocabulary was preferred over lower frequency medical terminology. Both the qualitative and quantitative results of the NA informed the curricular priorities of a Spanish for Emergency Room Nursing course. The four objectives proposed for the course were to use Spanish to: 1) obtain a patient’s vitals 2) assess a patient 3) administer medications and/or treatments to/on a patient and 4) build rapport with a LEP patient. These four objectives were used as target tasks to create a general syllabus for the course. The process of converting target tasks to type tasks and then creating a pedagogical task sequence was exemplified through the use of a sample sequence.

Implications

One of the implications of this study is on society as a whole, namely the impacts of language barriers on healthcare. It has been previously mentioned that linguistic barriers in medical settings can often lead to inequality in access to healthcare as well as medical errors (Bender et al., 2004; Martinez, 2010; Ginde et al., 2008). While medical interpreters are the first line of defense in confronting linguistic barriers in medical settings, they are often not used

(Martinez, 2015) either because the positions are not filled, the interpreters are not adequately trained, or simply because medical providers perceive the interpreters and their services as too cumbersome to use (Diamond et al., 2012). There is obviously much work still to be done in the area of interpretation in healthcare settings, as the participants of this study verified. However, in the meantime, Hardin (2015) shows that nurses learning a second language can complement the role of the interpreter and mitigate the impacts of the language barrier for Spanish-speaking, LEP patients (Altstaedter, 2017; Fernandez et al., 2011). While there is an obvious need for Spanish language instruction specifically for nurses, most nursing programs do not require its students to learn a language (Amerson & Burgins, 2005; Hardin, 2015). The present study addresses the societal issues that result from language barriers in healthcare by offering recommendations and a curricular plan for educating ER nurses in medical Spanish.

Another implication of the study is pedagogical. Because healthcare providers have limited time in their degrees and/or careers for learning Spanish, the traditional language class will not meet the specific needs of ER nurses. Second Language Acquisition (SLA) research shows that traditional language courses are not conducive to the highest levels of language proficiency (Van den Branden et al., 2009; Samuda & Bygate, 2009); instead, language is best acquired through a communicative lens, by interacting with speakers of the language and the language itself (Hymes, 1971; Widdowson, 1978; Brumfit, 1984; Prabhu, 1987). While there are several options when diverging from the traditional, general language course, the present study proposes a blend of LSP and TBLT. Particularly, it adopts the domain specificity of LSP (Belcher, 2009), the task-based approach to curriculum design and teaching of TBLT (Long, 2015), and the attention to learner's specific needs of both disciplines (Van Avermaet & Gysen, 2006; Belcher, 2009). The study makes a strong case that TBLT and LSP can be merged in

developing a Spanish for Emergency Room Nursing course to effectively meet the needs of ER nurses. This fusion of the two disciplines could be of interest to curriculum developers and course designers who want to meet the needs of a specific group of learners and use a teaching approach with a strong foundational and theoretical base.

A final implication of the study is theoretical in nature. The present study aimed to add to the, until very recently, scant literature on the methodologies of task-based NAs and to implement recent methodological recommendations. Because past NAs lacked attention to detail when it came to methodological reporting (Long, 2005; Serafini et al., 2015), this NA aimed to meticulously detail the methodology used as well as offer a strong theoretical foundation for the choices in methodology. One of these choices was triangulation of sources (Long, 2005).

Research shows that triangulation is beneficial in that it adds credibility to the study and its findings (Jasso-Aguilar, 1999). The present study collected data from three different participant groups, or stakeholders. Another limitation of NAs that the study tried to circumvent was the imposition of the researcher's own ideas on the data. According to Long (2005), the researcher or linguist is prone to drawing conclusions about the data during the process of translating the participants' responses into linguistic measures. For this reason, the researcher used two forms of member checking to mitigate the risk of this phenomenon happening. The researcher also kept a detailed research log to document decisions made during each step of the data collection and data analysis process. But most importantly, the research was done from a task-based framework, which allows for a common frame of reference between researchers and informants, as opposed to a purely linguistic-based NA, lessening the risk of researcher subjectivity.

Limitations

There were several limitations with the current research. The most obvious limitation with the research methodology was that there are only two methods of data collection: questionnaires and interviews. At the start of the project, observations were to be the third method of data collection, thus ensuring triangulation of both sources *and* methods. The choice to exclude observations was made for two reasons. The first reason was because of the highly personal nature of medical situations. Observations were considered invasive and too large a threat to privacy. Hospitals in the area had strict rules about observations that did not allow entrance of the researcher. The second reason was the recent and ongoing COVID-19 pandemic. The physical dangers to both the researcher and the participants that might arise during close contact required during observations did not outweigh the benefits of using this method of data collection.

The research had another limitation in its methodology—the lack of member checking between Phases 1 and 2. While member checking was used between Phases 2 and 3 and after Phase 3, it was not used to refine the list after the first phase of research. This limitation was an oversight by the researcher which resulted in the researcher creating CTs and organizing STs from the P1 questionnaire responses without first verifying them with participants. Although the limitation was slightly mitigated by including a form of member checking in the P2 questionnaire where participants could verify the appropriateness of CTs and STs, it would have been more efficient for the member checking to have taken place during another set of interviews. This way, the researcher could get more detailed input on the CTs before asking participants to rank them in the questionnaire.

Another limitation of the study concerned participant representation and recruitment. First, there was an obvious lack of representation when it came to advanced nursing students and nursing faculty. The small number of participants of this type was most likely due to the fact that the students and instructors did not have (or, rather, did not feel that they had) enough ER experience to participate in the project. The second limitation in regard to recruitment was in the case of ER nurses, ER managers, and head nurses. Despite the fact that there were several hospitals represented in the study, the majority of the participants came from one hospital location. It would have been better to have had a sampling from several different hospitals in the area; however, the approval process for research in each individual hospital was both lengthy and complicated, making research in more than one site logistically impossible within the time constraints of this study. Finally, there was a limited number (38) of participants in the study in general. Again, the reason for the lack of participants stemmed from recruitment limitations due to COVID-19 as well as time constraints for the research.

Recommendations for Future Research

There are several recommendations for future research that can be gathered from this dissertation. In a more general sense, there is an immediate need for more research, particularly collaborative research between linguistics and other disciplines such as public health, on the health impacts of linguistic marginalization, specifically language policy and interpreter training and funding (Showstack et al., 2019; Youdelman, 2017). More specific to the study at hand, the same methodology used in this dissertation needs to be applied to more contexts (i.e., more hospitals) and with a larger group of participants to determine the language needs of ER nurses in a given area. However, the results of this NA can be used as a general template for ER nurses'

needs. Further research could investigate the language needs of nurses in non-ER settings as well. As far as methodology of future studies, it would be wise to triangulate both sources and methods, including observations as a third choice for methods. It should be noted; however, the process of approving this method of data collection could be lengthy, and a research timeline should account for that possibility. Finally, research could also take the results of this NA further by developing a Spanish for Emergency Room Nursing course or apply the methodology to a unique domain with the same or a different language focus. Finally, classroom research could implement and improve upon the course design suggestions and curricular priorities presented in this dissertation.

Contribution of the Study

The contributions of this study are mainly conceptual such as an improved NA methodology for future NA studies. The same methodology used in this study can be repeated in future NA studies, combating the methodological vagueness of some previous NAs to date. The study also has offered an example of how TBLT and LSP intersect and complement one another when it comes to research design which can be utilized in future research. The study has also contributed to the field of second language education. Task-based course designers, curriculum developers, and educators can use the findings of this NA in the creation of a Spanish for Emergency Room Nursing course or as part of a more general nursing or emergency medicine course. Another contribution to language education from the study would be a concrete example of how to apply a NA in the classroom. The process of creating a sample pedagogical task sequence (see Long 2015) can be replicated for transferring the findings of any NA to the TBLT classroom. Finally, while this study in and of itself does not offer a direct contribution to society

in the form of mitigating the, at best frustrating and at worst devastating, effects of the language barrier in healthcare, it is hoped that the study has opened a conversation and offered an example of how second language education can do its part in the issue.

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Appendix A

P1 Questionnaire

This questionnaire is a first step in gathering information to inform the design of a task-based Spanish for Nursing course. Please read the attached consent form. Do you consent to participate in this study?

Yes / No

1. Please provide an email address that the researcher can use to reach you:

2. How many years of experience do you have in the emergency room context?

- a) Less than a year
- b) 1-2 years
- c) 2-5 years
- d) 5-10 years
- e) More than 10 years

3. Which emergency room have you worked in or experienced?

4. Which of the following categories best describes your current employment position?

- a) Hospital director, administrator or manager
- b) Nursing faculty
- c) Nursing student in clinical rotations
- d) Nurse

5. What is the highest level of nursing education that you have completed?

- a) PN
- b) ASN
- c) BSN
- d) MSN
- e) PMC
- f) Other

6. Please list any tasks that you have either witnessed or performed in the emergency room setting. Include as many as you can remember. Try to list at least three.

Example: taking a patient's blood pressure

Appendix B

P1 Interview Protocol

Domain Superiors

1. How long have you worked in your current position?
2. What is your primary language? Do you speak Spanish at home?
3. How often do emergency room nurses encounter Spanish-speaking, LEP patients?
4. How highly do you value Spanish-language skills in ER nurses? Would you encourage ER nurses to take a Spanish for Nursing course?
5. What tasks would be most beneficial for ER nurses to know how to perform?
 1. Reading?
 2. Listening?
 3. Writing?
 4. Speaking?

Domain Experts

1. How long have you been an ER nurse? OR how long have you been in rotation at the ER?
2. What is your primary language? Do you speak Spanish at home?
3. Have you ever taken a Spanish language course? Which levels? What classes?
4. How often do you encounter Spanish-speaking, LEP patients in your work?
5. Describe a time when it would have been helpful to know how to speak Spanish.
6. What are some tasks that you complete daily in the emergency room?
 1. Reading?

2. Listening?
3. Writing?
4. Speaking?

Domain Insiders

1. What is your primary language? Do you speak Spanish at home?
2. What class are you in? Beginner, intermediate, or advanced?
3. Have you ever been to an ER in the area? If so, which one? Describe the experience.

What interactions did you have with the nurses?

4. Did your English ability impact the care that you received?
5. What aspects of the ER visit caused the most linguistic confusion?

Appendix C

P2 Questionnaire

Please read the attached consent form. Do you agree to participate in this questionnaire? (If you select "no," your response will not be included.)

Yes / No

Please provide an email address that the researcher can use to reach you:

Please rate the following tasks according to frequency:

	Never	Sometimes	Often	Very Often
Obtaining a patient's vital signs				
Administering medications and/or treatments to a patient				
Inserting and/or placing lines and/or tubes in a patient				
Inserting and/or placing a catheter in a patient				
Managing a patient's condition				
Performing medical procedures and/or treatments to/on a patient				
Performing diagnostic medical procedures and/or treatments performed to/on a patient				
Managing a patient's medications				
Assisting with medical procedures and/or treatments to/on a patient				
Assessing a patient's condition				
Documenting assessments or charting a patient's condition				
Educating a patient or a patient's family				
Monitoring a patient's condition				
Transporting or physically handling a patient				
Collecting lab specimens from a patient				
Caring for a patient's hygiene and/or comfort				

Feeding a patient
 Providing general care for a patient
 Following up with a patient

Please rate the following tasks according to importance:

	Not Important	Slightly Important	Important	Very Important
Obtaining a patient's vital signs				
Administering medications and/or treatments to a patient				
Inserting and/or placing lines and/or tubes in a patient				
Inserting and/or placing a catheter in a patient				
Managing a patient's condition				
Performing medical procedures and/or treatments to/on a patient				
Performing diagnostic medical procedures and/or treatments performed to/on a patient				
Managing a patient's medications				
Assisting with medical procedures and/or treatments to/on a patient				
Assessing a patient's condition				
Documenting assessments or charting a patient's condition				
Educating a patient or a patient's family				
Monitoring a patient's condition				
Transporting or physically handling a patient				
Collecting lab specimens from a patient				
Caring for a patient's hygiene and/or comfort				
Feeding a patient				
Providing general care for a patient				
Following up with a patient				

1. Which of the following tasks does an emergency room nurse perform when **obtaining patient's vitals?**

- Obtaining a patient's heart rate
- Obtaining a patient's respiratory rate
- Obtaining a patient's oxygen saturation
- Taking a patient's blood pressure
- Taking a patient's temperature
- Listening to a patient's breathing
- Listening to a patient's heart
- Listening with a stethoscope

2. Which of the following tasks does an emergency room nurse perform when **administering medications and/or treatments to a patient?**

- Giving shots
- Administering eye drops
- Administering ear drops
- Administering blood and or blood products
- Administering TPA (blood thinner)
- Administering oxygen using a simple mask, non-rebreather, or BVM
- Applying dressings
- Applying slings and casts
- Administering nebulizer treatments
- Performing an IO
- Applying steri-strips

- Calculating TPA dose
3. Which of the following tasks does an emergency room nurse perform when **inserting and/or placing lines and/or tubes in a patient?**
- Starting an IV
 - Starting a peripheral IV
 - Placing an NG tube
 - Intubating
 - Inserting a chest tube
 - Starting a central line
 - Starting an ART line
4. Which of the following tasks does an emergency room nurse perform when **inserting and/or placing a catheter in a patient?**
- Inserting a Foley catheter
 - Inserting an in and out catheter
 - Inserting an indwelling catheter
 - Inserting a straight catheter
 - Inserting a urinary catheter
 - Inserting an external catheter (male & female)
 - Inserting an intravenous catheter
5. Which of the following tasks does an emergency room nurse perform when **managing a patient's condition?**
- Managing a chest tube
 - Managing a urinary catheter

- Managing a patient's temperature on a Bair Hugger
 - Managing an EKG
 - Accessing a port
6. Which of the following tasks does an emergency room nurse perform when **performing medical procedures and/or treatments to/on a patient?**
- Flushing eyes
 - Sedating patients (moderate/conscious sedation)
 - Performing an enema disimpaction
 - Performing a vagal maneuver
 - Splinting broken bones
 - Removing foreign objects from ear
 - Delivering a baby
 - Suturing
7. Which of the following tasks does an emergency room nurse perform when **performing diagnostic medical procedures and/or treatments to/on a patient?**
- Performing an EKG
 - Placing a patient on a cardiac monitor
 - Performing a venipuncture
 - Performing a lumbar puncture
 - Performing paracentesis
8. Which of the following tasks does an emergency room nurse perform when **managing a patient's medications?**
- Titrating BP medications

- Titrating medications
9. Which of the following tasks does an emergency room nurse perform when **assisting with medical procedures and/or treatments performed to/on a patient?**
- Assisting with a pelvic exam
 - Assisting with sutures
 - Assisting with a live birth
 - Assisting with a closed reduction
 - Assisting with a radiology procedure
 - Irrigating a bladder
10. Which of the following tasks does an emergency room nurse perform when **assessing a patient's condition?**
- Triageing
 - Assessing pain
 - Performing a primary assessment
 - Performing a head-to-toe assessment
 - Assessing a skin condition
 - Assessing wounds
 - Performing a NIH exam or a neurological exam
11. Which of the following tasks does an emergency room nurse perform when **documenting assessments or charting a patient's condition?**
- Documenting wounds
 - Notifying a doctor of patient status and changes
 - Calling report

- Giving a bedside report
12. Which of the following tasks does an emergency room nurse perform when **educating a patient or a patient's family**?
- Educating a patient or patient's family on health problems
 - Explaining discharge instructions
13. Which of the following tasks does an emergency room nurse perform when **monitoring a patient's condition**?
- Monitoring ventilator settings
14. Which of the following tasks does an emergency room nurse perform when **transporting or physically handling a patient**?
- Assisting a patient to the restroom
 - Lifting, pulling, pushing of patients
 - Applying restraints
15. Which of the following tasks does an emergency room nurse perform when **collecting lab specimens from a patient**?
- Drawing blood
 - Collecting urine
 - Swabbing nose
 - Swabbing throat
 - Obtaining point-of-care labs
 - Checking blood sugar levels
16. Which of the following tasks does an emergency room nurse perform when **caring for a patient's hygiene and/or comfort**?

- Changing bedding and/or clothes
- Giving baths
- Performing Peri (perineal) care
- Cleaning dressings on a tracheostomy
- Dressing wounds

17. Which of the following tasks does an emergency room nurse perform when **feeding a patient**?

- Feeding via Peg tube
- Feeding via NG tube

18. Which of the following tasks does an emergency room nurse perform when **providing general care for a patient**?

- Caring for a patient with a STEMI (ST-elevation myocardial infarction)
- Caring for a patient with a stroke
- Caring for a patient with an overdose
- Performing trauma care
- Providing care after a spontaneous abortion

19. Which of the following tasks does an emergency room nurse perform when **following up with a patient**?

- Performing service recovery for a patient

Appendix D

P3 Interview Protocol

1. Take a look at the list of tasks in an ER setting.
 - Are there any that you would like to add or delete? Why or why not?
 - Which of the tasks would you rate as most important? Why?
 - Which of the tasks would you rate as most frequent? Why?
 - Do you agree with the ranking of the tasks? Why or why not? What would you change?
2. Take a look at the list of subtasks in an ER setting.
 - Are there any subtasks that you would like to add or delete? Why or why not?
 - Which of the subtasks would you rate as most important? Why?
 - Which of the subtasks would you rate as most frequent? Why?
 - Do you agree with the ranking of the subtasks? Why or why not? What would you change?
1. Do you have any suggestions, clarifications, etc. for the final list of tasks?

Appendix E

Final Task List

Task Category	Tasks
1. Obtaining a patient's vital signs	<ul style="list-style-type: none">a. obtaining a patient's heart rate (HR)b. obtaining a patient's respiratory rate (RR)c. obtaining a patient's oxygen saturation (O2 sat)d. taking a patient's blood pressuree. taking a patient's temperature
2. Assessing a patient's condition	<ul style="list-style-type: none">a. triagingb. assessing painc. performing a primary assessmentd. performing a head-to-toe assessmente. assessing a skin conditionf. assessing woundsg. performing a NIH exam or a neurological exam
3. Administering medications and/or treatments to a patient	<ul style="list-style-type: none">a. giving shotsb. administering eye dropsc. administering ear dropsd. administering blood and/or blood productse. administering TPA (Tissue plasminogen activator)f. administering oxygen using a simple mask, non-rebreather, or BVMg. applying dressingsh. applying slings and castsi. administering nebulizer treatmentsk. applying steri-strips
4. Inserting and/or placing lines and/or tubes in a patient	<ul style="list-style-type: none">a. starting an IVb. starting a peripheral IVc. placing an NG tubed. performing an intraosseous infusion (IO)

Final Task List (Continued)

Task Category	Tasks
5. Managing a patient's condition	<ul style="list-style-type: none">a. managing a chest tubeb. managing a urinary catheterc. managing a patient's temperature on a bair huggerd. managing an EKGe. accessing a port
6. Documenting assessments or charting a patient's condition	<ul style="list-style-type: none">a. documenting wounds
7. Monitoring a patient's condition	<ul style="list-style-type: none">a. monitoring ventilator settings
8. Collecting lab specimens from a patient	<ul style="list-style-type: none">a. drawing bloodb. collecting urinec. swabbing nosed. swabbing throate. obtaining point-of-care labsf. checking blood sugar levels
9. Educating a patient or a patient's family	<ul style="list-style-type: none">a. Educating a patient or patient's family on health problemsb. Explaining discharge instructions
10. Performing medical procedures and/or treatments to/on a patient	<ul style="list-style-type: none">a. flushing eyesc. performing an enema disimpactiond. irrigating a bladder
11. Assisting with medical procedures and/or treatments to/on a patient	<ul style="list-style-type: none">a. assisting with a pelvic examb. assisting with suturesc. assisting with a live birthd. assisting with a closed reduction

Final Task List (Continued)

Task Category	Tasks
12. Providing emergent care for a patient	<ul style="list-style-type: none">e. assisting with a radiology procedure
13. Transporting or physically handling a patient	<ul style="list-style-type: none">a. caring for a patient with a STEMI (ST-elevation myocardial infarction)b. caring for a patient with a strokec. caring for a patient with an overdosed. providing trauma caree. providing care after a spontaneous abortion
14. Managing a patient's medications	<ul style="list-style-type: none">a. assisting a patient to the restroomb. lifting, pulling, pushing of patientsc. applying restraints
15. Caring for a patient's hygiene and/or comfort	<ul style="list-style-type: none">a. titrating BP medicationsb. titrating medications
16. Performing diagnostic medical procedures and/or treatments performed to/on a patient	<ul style="list-style-type: none">a. changing bedding and/or clothesb. giving bathsc. performing Peri (perineal) cared. cleaning dressings on a tracheostomye. dressing wounds
17. Inserting and/or placing a catheter in a patient	<ul style="list-style-type: none">a. performing an EKGb. placing a patient on a cardiac monitor
	<ul style="list-style-type: none">a. inserting a Foley catheterb. inserting an in and out catheterc. inserting an indwelling catheter

Final Task List (Continued)

Task Category	Tasks
18. Following up with a patient	d. inserting a straight catheter e. inserting a urinary catheter f. inserting an external catheter (male & female) g. inserting an intravenous catheter
19. Feeding a patient	a. performing service recovery for a patient a. feeding via Peg tube b. feeding via NG tube

IRB Approval Letter

Institutional Review Board
Division of Research and Innovation
Office of Research Compliance
University of Memphis
315 Admin Bldg
Memphis, TN 38152-3370

March 2, 2022

PI Name: Lindsay Helms

Co-Investigators:

Advisor and/or Co-PI: Rebecca Adams

Submission Type: Initial

Title: Spanish for Emergency Room Nurses: A Task-Based Needs Analysis for a LSP Context

IRB ID: #PRO-FY2022-207

Expedited Approval: March 2, 2022

The University of Memphis Institutional Review Board, FWA00006815, has reviewed your submission in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. When the project is finished a completion submission is required
2. Any changes to the approved protocol requires board approval prior to implementation
3. When necessary submit an incident/adverse events for board review

4. Human subjects training is required every 2 years and is to be kept current at citiprogram.org.

For additional questions or concerns please contact us at irb@memphis.edu or 901.6783.2705

Thank you,

James P. Whelan, Ph.D.

Institutional Review Board Chair

The University of Memphis.