FORM, FUNCTION, AND RELEVANCE OF CONTEMPORARY LANGUAGE RESOURCE CENTERS

by

Paul L. Sebastian

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Paul L. Sebastian

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The following individuals read and discussed the dissertation submitted by student Paul L. Sebastian, and they evaluated his presentation and response to questions during the final oral examination. They found that the student passed the final oral examination.

Jennifer L. Snow, Ph.D.	Chair, Supervisory Committee
Richard Osguthorpe, Ph.D.	Member, Supervisory Committee
Kelly Arispe, Ph.D.	Member, Supervisory Committee
Rob Martinsen, Ph.D.	Member, Supervisory Committee

The final reading approval of the dissertation was granted by Jennifer L. Snow, Ph.D., Chair of the Supervisory Committee. The dissertation was approved by the Graduate College.

DEDICATION

In some ways, this dedication has proven harder to write than the bulk of this dissertation. At this point in my life, I feel much more comfortable writing a literature review than trying to produce two lines on a birthday card. Nevertheless, here goes.

First, to my darling wife, Jessica. To make up for the late nights and subsequent grumpy and stressed out days, I promise you a lifetime of adventures big and small. Let’s get the party started in Paris. I’ll meet you there in March, mon amour.

Second, to my daughters Ellie and Pemberly. As recompense for any precious moments I may have missed up until now, I promise you a never-ending supply of hugs, kisses, and chocolate. Seriously, ask me any time, any place. Consider it done.

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ABSTRACT

This dissertation was conducted in order to better understand the interplay between form, function, and relevance regarding contemporary language resource centers (LRCs). Five language centers housed by four different institutions of higher education in the western region of the United States were examined. Two representatives from each of the five centers were interviewed either in-person or over the phone (N = 10). Data were collected in the form of semi-structured interviews, on-site visits, and research journal entries. The data were analyzed using a flexible combination of multi-level qualitative coding, descriptive statistics, and narrative analysis. This study confirms recent findings that have shown LRCs to be a highly diverse group of institutions, particularly with respect to form and function (Kronenberg, 2017). The study also builds on previous investigations of language centers as contemporary reincarnations of the former audiolingual-style language laboratories (Liddell & Garrett, 2004; Wang, 2006). With respect to relevance, a common framework for discussing different language resource centers is outlined in the form of three paradigms: center/department, center/institution, and center/community.

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DEFINITION OF TERMS

Computer assisted language learning (CALL): A term that encompasses a broad range of topics related to the teaching and learning of language as facilitated by technology. Levy (1997) defines the term as “the search for and study of applications of the computer in language teaching and learning” (p. 1).

Foreign language education: A broadly defined term referring both to the instruction of foreign language as well as foreign culture as the two are intimately connected.

International Association of Language Learning & Technology (IALLT): An organization dedicated to better understanding language learning and technology in the context of foreign language education. This focus has been and continues to be rooted in the language resource center, formerly referred to as the language laboratory. The organization has undergone a good deal of change since its original inception as the National Association of Language Lab Directors (NALLD). IALLT meets biannually and is a frequent collaborator with other like-minded organizations like the Computer Assisted Language Instruction Consortium (CALICO) and the American Council on the Teaching of Foreign Languages (ACTFL).

Language resource center (LRC): A term used to refer to the majority of centers today which aim to assist in the efforts of foreign language education as curricular, technological, pedagogical, and research support centers. Currently, there seems to be a good deal of variability among these institutions. This variability is one of the topics being addressed in this dissertation. The terms language center, resource center, and language acquisition resource center are sometimes used synonymously throughout this dissertation.

Language laboratory: A term used to refer to the institutions that emerged in the early 20th century primarily as technology support centers for the teaching and learning of languages. Language laboratories are often differentiated from their modern counterparts, language resource centers, by their approach to providing access to technology and their accommodation of particular foreign language methodologies. With respect to technology, language laboratories have historically assumed the responsibility of providing access to difficult to specialized technologies in a single location. With respect to methodology, language laboratories are usually associated with the Audiolingual Method which sought to increase student proficiency through a repetitive exposure to input and a steady regimen of stimulus-based output (Shrum & Glisan, 2015).

CHAPTER ONE: INTRODUCTION

With this dissertation, I have sought a better understanding of the modern institution known as the language resource center (LRC). This opening chapter lays the groundwork for the study as I trace the historical roots of the LRC back to its 20th century counterpart, the language laboratory. This introduction serves to contextualize the present study by tracing the evolution from language laboratory to language resource center and by articulating the present problems, which served as impetus for this investigation.

The Language Laboratory: A Brief History

Perhaps the only appropriate beginning to this investigation is with a machine that was invented by Mr. Thomas Edison in the year 1877 (Peterson, 1974). Commonly referred to as the "talking machine" (Clarke, 1918), the phonograph allowed sound to be recorded and reproduced using a needle which would etch the patterns of sonic vibrations into the wax of a cylinder (McClure, 1879). Charles Clarke's 1918 article, *The Phonograph in Modern Language Teaching*, provides an interesting window into the connection between machine and methodology. In the article, Clarke explained that "the use of the talking machine in teaching foreign languages is by no means new" (p. 116). According to Clarke, the affordances of the talking machine had already been investigated and the machine's potential as a revolutionary tool for the teaching and learning of languages had mostly been abandoned. Clarke goes on to discuss the quality of cylinder recordings versus disc recordings and argued that the only meaningful contribution of Edison’s machine to the teaching and learning of languages was in the area of pronunciation (1918). This early piece on language learning and technology revealed two truths. The first is that interest in the relationship between technology and language learning goes back much further than the invention of the personal computer. The second is that even with Edison’s phonograph, the cycle of new tech hype and its inevitable replacement was no different than what can be seen in today’s technological climate. Moving forward, Edison’s phonograph would play an important role in the birth of the language laboratory.

Roby (2004) tells of one of the first language laboratories to be established was at the University of Grenoble in France in 1908. He goes on to explain how just a few years later, in 1911, Frank C. Chalfant, an American who had studied at the University of Grenoble, installed what was referred to as a phonetics laboratory at Washington State College (Roby, 2004). A successor to the Washington State laboratory was established in 1919 at the University of Utah by Ralph Waltz who later moved to Ohio State University to establish a phonetics laboratory modeled after the one he had built in Utah (Waltz, 1930, 1931). In his discussion of the physical resources of his labs, Waltz explained that “the minimum equipment would be one dictating machine, one shaver, one transcriber, one table with listening equipment, and a number of cylinders” (1930, p. 28). As for the construction of the physical space of the lab, Waltz explained that “the total cost of a complete initial set-up can be had for as little as 5 cents a week per student” (1930, p. 28). This focus on machine and cost would set the tone for discussions involving language laboratories for decades to come.

Just one year after Waltz's 1930 overview of the Ohio State University phonetic laboratory, Waltz (1931) published a second article on the topic, but this time referred to the space as a language laboratory. In this follow-up article, Waltz again dedicated several pages to a discussion regarding the cost of laboratory equipment. For example, in discussing alternatives to the traditional phonograph, Waltz explained that there were many types of recording devices including "the Scully, Moneypenny, Melograph, Speak-a-letter, Speak-o-phone, Telegraphone, Telecord, Jenkins, Bristol, Victor home recording, etc. But all of them are too expensive, inefficient for our purposes, and hence impractical" (1931, p. 218). My focus here on cost may seem irrelevant in matters of second language acquisition and pedagogy but it underscores an important reason for why language laboratories became so integral to language programs throughout much of the 20th century. Waltz's oddly specific discussion of the hardware costs of these early language laboratories suggests that these machines were financially out of reach for the typical student. Because students lacked personal access to these important language learning devices, there was a need for the university to make them available. Therefore, providing access to expensive language learning technology constituted one of the reasons for the subsequent growth and expansion of the language laboratory.

Beyond the discussion of access to technology, there is another reason why language laboratories began to spread throughout the country as a default annex of the foreign language department. This second reason had its roots in the ebb and flow of foreign language methodology. At around the same time that language laboratories were beginning to emerge in the early 20th century, an important methodological shift in foreign language teaching was also taking place. For years, the Grammar-Translation

Method had been utilized for the teaching and learning of Greek and Latin (Omaggio Hadley, 2000). In describing the application of this method in the classroom, Omaggio Hadley explained that “its primary purpose was to enable students to access and appreciate great literature, while helping them understand their native language better through extensive analysis of grammar of the target language and translation” (2000, p. 106). With the Grammar-Translation Method, the grammar of great texts was analyzed and the poetic prose of the classics were translated from one language to another (Omaggio Hadley, 2000). In this sense, the Grammar-Translation Method was primarily a reading and writing oriented methodology which would later contrast sharply with the advent of the Audiolingual Method (Roby, 2004; Shrum & Glisan, 2015). Although it is difficult to accurately chronicle the history of foreign language methodology, Shrum and Glisan (2010) indicate that the Audiolingual Method began to take hold sometime around the 1940s and 1950s and was heavily influenced by the work of behavioral psychology. In their description of the Audiolingual Method, Shrum and Glisan wrote that there was an “emphasis on habit-formation and automatization based on repetition of teacher model with focus on pronunciation, stress, intonation, and rhythm” (2015, p. 45). Although both methods focused on language as something to be conquered through memorization and recall, it was their differences in modality that set the two apart. Compared to Grammar-Translation, the Audiolingual Method marked a clear transition of focus from reading and writing to an approach rooted in speaking and listening. Because the language laboratory provided access to machines that could capture and reproduce sound, it found itself well positioned as a critical component to foreign language education in the new methodological climate. In order to provide a sense for how the audiolingual-style laboratories looked, I have included the following two photographs as Figures 1.1 and 1.2. These photographs are included here with permission from the Rhodes College Archives in Memphis, Tennessee.

Figure 1.1. Audiolingual-style Language Laboratory: Rhodes College

Photo Credit: Rhodes College Archives, Memphis, TN

Figure 1.2.   Audiolingual-style Language Laboratory: Rhodes College

Photo Credit: Rhodes College Archives, Memphis, TN

The photographs represented in Figures 1.1 and 1.2 above are typical of the language laboratories of this era. These photographs demonstrate the widespread adoption of headsets and microphones needed to carry out numerous audiolingual-oriented exercises. Furthermore, the photos show how students were isolated one from another. This isolation highlights the fact that the Audiolingual Method required very little authentic human to human interaction. Beyond the issues of access and methodology, a third and final factor played an important role in the rise of the language laboratory: the launch of Russia's Sputnik satellite.

With the launch of Sputnik in 1957, the United States began to scramble as the threat of Russia's dominance in space loomed large (Roby, 2004). As Baker (2011) explained, with the launch of Sputnik, "a new consciousness was aroused about the need for foreign language instruction" (p. 186). With this new impetus, the goals espoused by the Grammar-Translation method of teaching and learning languages continued to fade. Rather than access to classical literature, the United States needed people who could access critical information which was encrypted in languages other than English. Although national interest in foreign language learning had been steadily growing since World War II, it was the National Defense Education Act (NDEA) of 1958 that ushered in this golden era for language laboratories (Roby, 2004). In an attempt to catch up to the Russians in the race to space, the United States began to commit financial resources in three specific areas: science, mathematics, and modern foreign languages (Roby, 2004). Consequently, federal dollars started to pour into foreign language programs as the US government increased their financial support for foreign language research and teacher training (Mathieu, 1962). The impact of the NDEA on the growth of language laboratories is most apparent when looking at the increase of the number of language laboratories in existence before and after the act was passed. Keating (1963) pointed to the results of a survey that demonstrated an increase in the number of language laboratories from 240 at institutions of higher education in 1957 to 700 in the year 1961. These figures show how technology, methodology, and the threat of the Russian Space program all played critical roles in the birth and exponential growth of the 20th century language laboratory. Following the passing of the NDEA, language laboratories would enjoy a number of years of external validation and a comparatively keen understanding of who they were, what they were doing, and why they mattered.

From Language Laboratory to Language Center

Toward the end of the 20th century, the golden age of language laboratories started to fade. In fact, as early as 1970 there was talk about how the language laboratory had failed to assist language learners in their quest for foreign language proficiency (Sherrow, 1970). Renee Sherrow offered the following reflection at the 1970 Northeast Conference on Teaching held in Boston Massachusetts:

> Let's install a lab! Nothing can go wrong! It was the decade of the sixties: a golden era. Language institutes flourished, electronic labs sprouted, magnetic tapes proliferated, and Candide-like optimism prevailed throughout the land. Surely, labs could help solve many of the problems facing language educators. The sixties, however, often proved to be a golden error. Language labs *caused* at least as many problems as they solved, and teachers discovered, contrary to expectations, that almost nothing could go *right* in lab. (p. 28)

Ironically, just as emerging technologies and shifting methodologies had played a role in the rise of the language laboratory, they subsequently contributed to its slow decline in popularity. Figure 1 demonstrates the rise and fall of language laboratories as facilitated by innovations in technology and foreign language methodology.

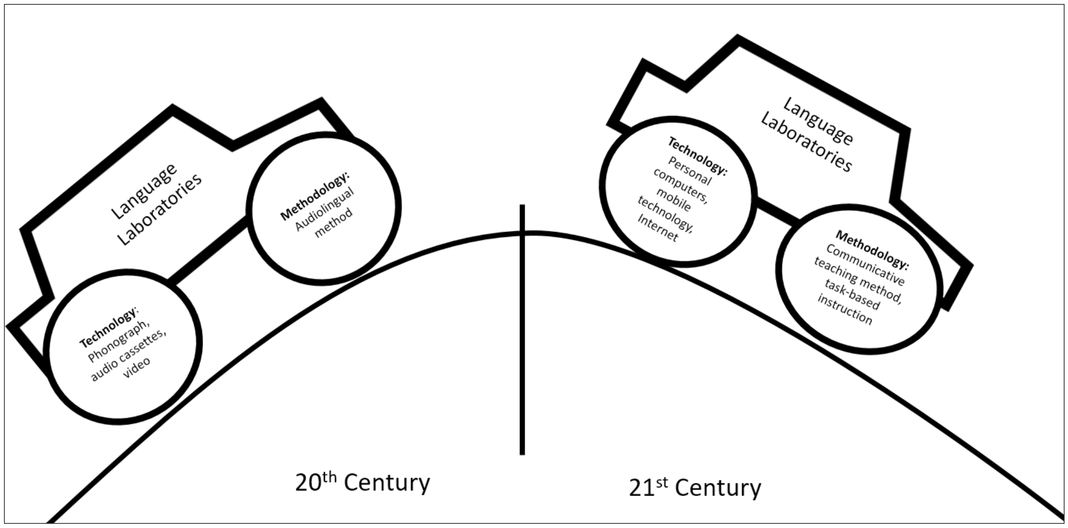

Figure 1.3. The Rise and Fall of the Language Laboratory

As Figure 1 indicates, increased access to technology and a more communicative approach to foreign language education caused a sort of identity crisis for many language laboratories (Koerner, 1988). In addressing the declining role of the traditional language laboratory, Koerner (1988) wrote the following:

> In the past, we referred to our facilities as 'language laboratories,' a name which survives to this day and which often conjures up unpleasant thoughts: boring rooms filled with metal carrels that creaked and electronic equipment which did not always function fully to its advertised potential. (p. 83)

As the need for access decreased, language laboratories and those associated with them began to reevaluate their relevance in an increasingly digital world. One indication of this reevaluation was the shift in terminology as the term language laboratory was slowly replaced by language resource center (LRC). Tchaïcha (2003) underscored this shift in terminology writing that "language resource center, media center, and CALL center are terms used today to describe a facility where students who are studying a language other than their own (L2) can go to practice and learn" (p. 47). Shrum and Glisan (2010) referred to the institutions as multimedia centers and others, like the federally funded center at San Diego State University, were referred to as language acquisition resource centers. This variation in terminology was one sign of the search for an updated and cohesive identity as the laboratories of the past struggled to define themselves in a world where technology was increasingly ubiquitous and the primary methodology for the teaching and learning of languages was one where meaningful communication reigned supreme (Lee & VanPatten, 2003; Shrum & Glisan, 2015).

During this time, existing language laboratories also began to experiment with how things were done in an effort to keep pace with the changing climate of foreign language education. Some reverted back to a literal interpretation of the laboratory as a space for controlled experiments where second language acquisition could be measured with precision under laboratory-like conditions (Harroff, 1985). Others tried to consolidate their efforts by forming partnerships with other institutions and pouring their combined resources into a single shared language resource center (Lyman-Hager, 1990). The rest pushed through these years of uncertainty by doing what language laboratories had done for decades: acquiring new and emerging technologies and facilitating their pedagogical use for both teacher and student (Garrett, 1991). In addressing this time of institutional fragmentation, Roby (2004) wrote that "the language laboratory had an 'image problem' that needed to be addressed before teachers and learners were ready to use it" (p. 529). These concerns led Scinicariello (1997) to write that there was "no ideal language lab for the twenty-first century" (p. 186). Nevertheless, the institution of the language laboratory continued to hang on for the last few decades of the 20th century and could still be found in various forms after the turn of the century.

At around this same time, the United States Department of Education established the first round of national language resource centers which included the Language Acquisition Resource Center (LARC) at San Diego State University, the National Capital Language Resource Center (NCLRC) at Georgetown University, and the National Foreign Language Resource Center (NFLRC) at the University of Hawaii (NFLRC, 2017). After these three centers had been established in 1990, the Department of Education, with the support from Title VI of the Higher Education Act, went on to establish other national language resource centers throughout the country (NFLRC, 2017). Today, the number of Title VI funded centers is 16 and their specialties range from a focus on language learning at the community college level to emphasizing specific language groups like the Slavic and Eurasian Language Resource Center at Duke University (NFLRC, 2017). Although these national language resource centers continue to play an important role in the teaching and learning of foreign languages, an important distinction must be made between these federally funded centers and those that have already been discussed. The Title VI centers that have emerged over the last several decades are in a very different league than the LRCs owned and operated at the local level. The latter have been around since the early days of the phonograph and the former have only recently emerged as well-endowed, government-backed institutions. Furthermore, this study aims to better understand the form, function, and relevance of the non-Title VI LRCs. But, a thorough understanding of the transition from language laboratory to language resource center would not have been possible without mentioning the national LRCs that have contributed so much over the last few decades. One more benchmark in the transition from laboratory to resource center took place at the Massachusetts Institute of Technology campus in 1989.

Communities of LRC Professionals

In 1989, members of what was then known as the International Association of Learning Laboratories (IALL) gathered at MIT to discuss the state of the evolving language laboratory (IALLT, 2015). At this meeting, Ruth Trometer, president of the organization, helped to establish a new tradition where a biennial conference would be held to discuss matters related to language learning and technology with a specific focus on the language laboratory (IALLT, 2015). A few years after the MIT conference, the organization changed their name from the International Association of Learning Laboratories to the International Association of Language Learning and Technology (IALLT, 2015). This name change was important because in dropping the term “laboratory,” the organization echoed the shifting paradigm of the time as attention was turned from language laboratory to language resource center. This was not the first name change the organization had undergone. In the beginning, the organization was established as the National Association for Language Lab Directors (NALLD) back in 1965 during the height of what Roby (2004) referred to as the language laboratory boom. The name change from NALLD to IALL occurred in 1982 at a time when language laboratories were beginning to rebrand themselves as modern multimedia centers (Roby, 2004). Together, NALLD, IALL, and IALLT have served as the professional home for language lab professionals for the last six decades. Just this year, IALLT held their biennial conference at Concordia College in Moorhead, Minnesota where I participated as a first time attendee.

At the 2017 IALLT Conference in Moorhead, I found myself surrounded by seasoned veterans and a small handful of wide eyed first-time attendees. Between the numerous sessions on various aspects of language centers, I had a chance to rub shoulders with both long-standing IALLT members and newer members like myself. Some spoke fondly as they reminisced about the past few decades of their membership in the organization while others exuded an energetic optimism about the future of their work as directors, staff members, and faculty. Having begun this study on language resource centers prior to my arrival in Moorhead, I tried to get a sense for the present condition of LRCs. One of the central themes that seemed to run through almost every session that I attended and almost every conversation that I had was embodied in Julie Evershed's opening plenary address about her experiences as the director of the University of Michigan's language resource center (2017). As Evershed discussed the LRC at the University of Michigan, she spoke often about external forces that threatened to reform and/or replace various functions of the center (Evershed, 2017). These concerns were echoed in other sessions as members discussed the declining demand for access to technology and their efforts to replace underutilized computers with socially inviting furniture (Cruz, 2017; Kronenberg, 2017). Others discussed their efforts in increasing their virtual presence in an age where the need for physical facilities appear to be fading away (Ross, 2017; Sebastian, 2017). As I later reflected on my participation in the 2017 IALLT conference, I found that my participation had resulted in a sort of cautious hopefulness about the future of language resource centers and their roles in foreign language education.

I felt cautious as I reflected on the conversations about the relevance (and in some cases, irrelevance) of the LRC in today's technological and methodological climates. And yet I felt hopeful as each person I met seemed to exude a sincere and genuine concern for foreign language education. What was perhaps most impressive was that these individuals did not come from one obscure branch of a narrowly defined academic discipline. On the contrary, there was an exciting blend of faculty and staff who came from backgrounds in education, library science, technology, linguistics, and foreign languages. Professional staff sat at the same tables as well-written tenured professors and, just as advertised, people did really seem to like one another. These observations from the IALLT conference helped to frame this dissertation and the subsequent investigation of today's language resource centers. However, despite the insights I was able to gain from the conference, I realized that the answers to the core questions that comprised this present study were only beginning to emerge.

Background of the Problem

My first exposure to a language laboratory occurred almost a decade ago as a novice student of French while I was working on my undergraduate degree in Spanish. As part of my French class, I was asked to descend into the depths of the business building to the basement where rows of computers glowed in a windowless room. The computers were occasionally utilized as overpriced televisions where students could fulfill their obligatory language lab time by watching foreign language DVDs or listening to foreign language music. My required time in the laboratory was more participatory in nature as I was asked to submit speaking samples using a microphone and headset which would then be saved electronically for later review by my French professor. Later, my professor would then upload her own file as feedback to my submission. As I carried out these tasks, the computer stations next to me were often either vacant or again, being used as overpriced and overpowered televisions.

My second exposure to a language laboratory was during my graduate studies at another institution. At this second institution, the laboratory had previously gone through the process of rebranding and the rooms which were once home to old metal carrels and headsets were filled with spacious desks upon which sat shiny Apple computers. My interactions with this new lab were quite different from my previous experiences. First, my experience with the lab at my previous institution was as a student. At this new institution, my interactions with the center were twofold. First, I used the space as a graduate instructor where I utilized the private testing rooms to administer oral proficiency exams to my students at the end of each semester. It is important to note that none of the introductory Spanish language classes required students to spend a minimum amount of time in the center. My second association with this second lab was in the capacity of curriculum developer where I worked with a team to develop a custom video player which could break up YouTube videos into smaller segments. My job was to design curriculum materials to go along with the videos which were then used in a pilot intermediate Spanish course of which I was an instructor. In examining these two laboratories as examples, it is interesting to think about the differences between the two centers which, fifty years ago, might have been virtually identical.

Eventually, my work on the YouTube video project at the new lab came to an end and, after defending my thesis on a topic related to language learning and technology, I spent the next five years teaching at a small liberal arts college with no language laboratory facility at all. Then, during the 2017-2018 academic year, I came across a job advertisement looking to hire someone to direct a brand-new language resource center and to teach courses in second language acquisition as a tenure-track faculty member. The idea of helping transition what sounded like a very traditional language laboratory into a more modern language resource center prompted me to apply for the position. The timing coincided perfectly with my doctoral studies as I was just beginning work on my dissertation. What had started out as a dissertation about professional development in computer assisted language learning (CALL), soon shifted to a focus on the language resource center as a modern reincarnation of the 20th century language laboratory.

Here before me was the very real, very tangible task of directing the transition of a language laboratory into a language acquisition resource center. As I started to look into other LRCs, I began to realize that no single, well-defined model existed. The models I came across were either organized differently or they performed a mixture of dissimilar functions. Furthermore, there was no common title for these centers as some were still referred to as laboratories while others had adopted the newer title of language resource center. Around this time, I began to reflect more critically on my experiences with the language laboratory at my undergraduate institution and the language resource center I worked for during my graduate studies. How were these two institutions so different given their relatively common purpose to assist in the process of teaching and learning foreign languages? As with most scientific studies, this dissertation was born out of a series of real questions about real issues of which I was just beginning to understand.

After gathering some preliminary evidence and delving into some of the literature, I began to ask myself the all-too familiar dissertation-destroying question, “So what?”

What did it matter that language resource centers were different one from another? I began to wonder if language resource centers really were necessary in today's technological and methodological climate. After all, I had just completed my fifth year of teaching foreign languages at a school that did not have one. The situation, as I began to see it, was this: Either language resource centers were obsolete shells of their former selves or they were, in fact, contributing to the advancement of foreign language teaching and learning. If they were contributing positively to foreign language education, I wanted to know how. On the other hand, if there were, in fact, obsolete, I wanted to know why so many were still in existence. Given my previous experience with language laboratories, my suspicion was that some centers, like the language laboratory at my undergraduate institution, were fading in the new technological and methodological climate of foreign language education. Meanwhile, other centers, like the one I encountered during my graduate studies, were managing to thrive and adapt through innovative and creative ways of thinking.

An early hypothesis of this dissertation was that language resource centers were contributing to the efforts of teaching and learning languages by serving as centers for informal and formal CALL professional development. This early hypothesis was based on a 2013 survey of LRCs where Kronenberg (2016) found that 59% of language centers listed professional development as one of the main services they provide. After formulating the hypothesis, I conducted a systematic literature review on the topic of CALL professional development in search of possible connections to language resource centers. The results from the review were interesting but did not reveal any substantial evidence that LRCs were acting as hubs for CALL professional development.

Consequently, I abandoned the early hypothesis and broadened the scope of my inquiry. This broadening resulted in an interview protocol designed around three facets of the modern language resource center: form, function, and relevance.

Statement of the Problem

In my quest to better understand how LRCs were organized, what functions they performed, and how they were relevant, I hoped to address one central and deeply concerning problem. Given that language centers require significant institutional investment; very little information is available regarding their relevance to the current paradigms of foreign language education. If these centers are contributing to the advancement of foreign language education, then these contributions are not being widely disseminated. On the other hand, if they are obsolete, their continued existence means that they are draining resources and energies which might be directed to other, potentially more beneficial, endeavors. This dissertation is only a step toward a better understanding of these issues.

Research Questions

My work with this dissertation has been primarily driven by two underlying goals. The first is largely descriptive in nature as I sought to understand the current state of language resource centers. Only after addressing my first goal would I then be able to contribute to the discussion about the second underlying goal of this project: finding out whether or not LRCs are still relevant to the teaching and learning of foreign languages today. O’Leary (2010) discusses this two-fold mission of research questions arguing that good research questions help to direct and define the inquiry while also leaving enough room for curiosity and spontaneous discovery. Given my two underlying goals, and with

O'Leary's (2010) guide for developing research questions in mind, I drafted the following research questions for this study of language resource centers.

1. How has the organization of language resource centers changed over time?
2. In what ways, if any, do language resource centers contribute to the efforts of foreign language teaching and learning?
3. How are language resource centers still relevant, if at all, today?

The first research question aims to describe how LRCs are organized with respect to staffing, administration, and oversight. Furthermore, the question leaves enough room for me to look into where each LRC lives within the institution and to inquire about each centers' funding strategies. Similarly, the second research question directs my work towards a focus on function while leaving me enough room to analyze how the various functions of the LRC contribute (or fail to contribute) to the overall effort of foreign language education within the institution. The question allows me to be descriptive in my quest to understand the various activities that each center is engaged in but also analytic as I add my own analysis about whether those activities are contributing to language education in meaningful ways. Finally, the third question, "How are language resource centers still relevant, if at all, today?", is much more exploratory compared to the first two research questions. For the third question, I did not anticipate that I would be able to offer any definitive or entirely conclusive answers. But, I hoped that my work on this dissertation would at least begin to reveal a potential answer to this question, or, at the very least, offer a model which could be used to answer the question with more confidence than what my relatively small sample size afforded me. Nevertheless, the three research questions above both directed and inspired the work of this dissertation.

Significance of the Study

Here, I circle back to that dreaded yet extremely important question, "So what?" What is to be gained by investigating the answers to the research questions above? How might answers to these questions impact foreign language education? What might be the peripheral consequences of conducting such a study and who really cares about these issues anyway? For me, the core significance of this study can be found in the issue of relevance. One binary interpretation of this issue is that today's language resource centers are either relevant to foreign language education or they are not. If the work being done by LRCs is, in fact, contributing positively to foreign language education, then these contributions need to be documented and disseminated so that other centers might have the chance to duplicate these successes. On the other hand, if the LRC is irrelevant to the teaching and learning of foreign languages, then resources and energies should be directed to other efforts which might ultimately yield better results. A second interpretation of the issue of relevance is that LRCs fall along a spectrum of relevance with each center maintaining different levels of relevance, each according to its own unique institutional spheres. If, as this second theory of relevance is more accurate, then a better understanding of this spectrum must be sought with an equal sense of emergency. The tricky part to this equation is that LRCs represent a long-standing tradition within foreign language education and many individuals have spent their entire professional careers associated with these organizations. These are not easy questions and so the answers to them must be sought with the utmost care and concern for all those involved. But, answers, whether good or bad, must be sought if foreign language education is to continue to thrive in the 21st century.

Positionality

Since beginning the work for this dissertation, my position as researcher has moved from outsider to newly appointed insider. The advantages and disadvantages of these perspectives have been well documented in the fields of anthropology, sociology, psychology, and applied linguistics (Dwyer & Buckle, 2009; Pike, 1967; Todeva & Cenoz, 2009). As this dissertation continued to unfold, I was simultaneously under consideration for a tenure track position as a professor of applied linguistics and founding director of a newly established language acquisition resource center. I have since been hired into this position and assumed this role in the fall of 2017. As one might suspect, this situation introduces the possibility of a biased analysis of language resource centers. In their discussion of insider bias, Dwyer and Buckle (2009) argued the following:

> Being a member of the group under investigation does not unduly influence the process in a negative way. Disciplined bracketing and detailed reflection on the subjective research process, with a close awareness of one's own personal biases and perspectives, might well reduce the potential concerns associated with insider membership. (p. 59)

Watt (2007) highlighted the benefits of keeping an ongoing research journal as a tool for ameliorating the potential biases mentioned by Dwyer and Buckle (2009). Watt argued that "an introspective record of a researcher's work potentially helps them to take stock of biases, feelings, and thoughts, so they can understand how these may be influencing the research" (p. 84). As a result of these caveats about personal bias, I recorded my thoughts and reflections in a research journal throughout the duration of the project. As discussed in Chapter 3 of this dissertation, these entries served as additional data points for the overall analysis of the data.

Finally, I wish to reiterate that my insider position as an LRC director was granted during the development and execution of this dissertation. Consequently, I approached the work in this dissertation first as an outsider and only later as a newly appointed insider. This transition from the etic perspective to the emic is quite rare in the sense that it occurred during the project itself. In my experience, most studies are framed with the researcher belonging to one group or the other throughout the entire duration of the study. Therefore, having had the opportunity to work on this project using both perspectives, it is my hope that my biases will not have unfairly influenced the final results.

Conclusion

In this chapter, I have provided a brief overview of the evolution from language laboratory to language resource center. I have argued that the rise and fall of the language laboratory was fueled both by technological as well as methodological innovations. In my discussion of the 20th century language laboratory, I indicated how the invention of the phonograph, the transition from the Grammar-Translation method to the Audiolingual Method of foreign language instruction, and the Space Race all contributed to the rise of the traditional language laboratory.

Furthermore, I have introduced the topic of the modern language resource center as a 21st century derivative of the language laboratory. I discussed how the title of these centers, the increase in mobile technologies, and the advent of the communicative teaching approach have influenced the transition from laboratory to resource center. In order to enrich this history, I included information about the professional organization that has paralleled this transition and offered a personal insight into what it was like to attend the most recent conference on these issues.

Finally, I have attempted to articulate the problems that this dissertation addresses and have introduced the specific research questions that have guided this project from beginning to end. I remind the reader that this study does not necessarily aim to offer a definitive answer regarding the relevance of the language resource center to the current models of foreign language education. Rather, the goal has been to scratch the surface of these issues and to establish a model which might be utilized by future researchers in order to ascertain a more comprehensive study of these issues. However, despite these limitations, this body of work represents a much-needed pivot towards a better understanding of the modern language resource center and its role in foreign language education.

In order to achieve these goals, a qualitative path of inquiry was chosen. Although the details of these decisions are more thoroughly discussed in Chapter 3 of this dissertation, Merriam's (1995) discussion of the purposes of this research methodology is of particular interest here. She writes:

> Qualitative research is ideal for the following: clarifying and understanding phenomena and situations when operative variables cannot be identified ahead of time; finding creative or fresh approaches to looking at over-familiar problems; understanding how participants perceive their roles or tasks in an organization; determining the history of a situation; and building theory, hypotheses, or generalizations. (p. 52)

I believe these goals to be important and worthwhile steps toward understanding particularly complex sets of phenomena. Consequently, I have designed the present qualitative study as a means of establishing the groundwork for subsequent studies on issues pertaining to language resource centers in the 21st century.

CHAPTER TWO: LITERATURE REVIEW

This chapter begins with an outline of the theoretical and conceptual frameworks that served to frame the current investigation on language resource centers (LRCs). Pertaining to the theoretical framework, a combination of related theories from the disciplines of educational psychology, second language acquisition, and educational technology informed this research project. With respect to the conceptual framework, I describe a two-tiered model that is first organized by topic (form, function, relevance) and secondly by time period (past, present, future). Given the complexities of these two frameworks, I provide accompanying visual models as ancillary guides to my narrative descriptions.

Following my discussion of the theoretical and conceptual frameworks, I then begin to highlight the most relevant findings in each of the three main areas of inquiry: form, function, and relevance. Furthermore, I have endeavored to separate these findings using the makers of past, present, and future. Much of the research referenced here comes from the journals that have been associated with the academic organizations already discussed in Chapter 1 of this dissertation, namely, the *National Association of Language Lab Directors (NALLD) Journal*, the *International Association of Learning Laboratories (IALL) Journal*, and the *International Association of Language Learning and Technology (IALLT) Journal*. In reality, these three titles represent one single journal that began in 1967 and continues to be published today. Interestingly, articles published in the NALLD and IALL journals, at the time of writing of this dissertation, were not accessible through any online search databases. Furthermore, the only accessible volumes of the most recent iteration of the journal, the *IALLT Journal*, were those published during and after 2002. In my quest for these materials, I posted a message to the IALLT Facebook group asking members if they knew of any way to access these offline and out-of-print publications. I was delighted to see that within twenty-four hours, I had received several responses suggesting a few long-standing members whom I might contact regarding my inquiry. A few emails later, I had received ten or eleven articles form the NALLD and IALL journals as email attachments and had been invited to assist with the task of uploading these decades worth of articles onto the current IALLT website. This simple invitation allowed me to gain access to almost the entire collection of articles from the very first volume of the *NALLD Journal* in 1967 all the way up to the most recent edition of the *IALLT Journal*. The earliest issue I had access to was actually the fourth issue of the first volume as the other issues exist only as physical copies and were likely tucked away in just one or two faculty offices. In addition to the NALLD, IALL, and IALLT publications, the recent edited volume by IALLT's current president, Felix Kronenberg (2017), played a key role in the decision to organize this chapter using the paradigm of past, present, and future. Other key findings are pulled from chapters in edited volumes, professional documents published by IALLT, and publications found in journals with missions that reach far beyond the specialized topics related to language centers and laboratories.

Regarding the perimeters of this review, it is important to note the criteria for what was (and was not) included in this overview. The majority of studies cited in this chapter focus specifically on the institution of the language lab or language center.

Excluded from this review were studies that only discussed the use of a particular technological tool, language teaching methodology, and/or focused on an aspect of language teaching or language learning without centering that discussion within the context of the language center. To offer an example of these parameters, only one of the nine chapters included in Bush and Terry's (1997) *Technology-Enhanced Language Learning* fits all of the criteria for the kinds of sources that I sought to include in this review. The other chapters focused their comments on popular technologies, methodologies, but did so in a way that was largely detached from the context of the language resource center. Some chapters in the volume even mentioned language laboratories but none, with the sole exception of Scinicariello's (1997) chapter, presented their findings as squarely within the context of the LRC. Now, this is not necessarily to say that the other chapters, nor the other sources excluded from this review, were in some way flawed or of poor quality. Their exclusion simply marks their irrelevance to the central issues explored in this study, issues which are all rooted firmly within the institution of the LRC.

Theoretical Framework

The problem with identifying a theoretical framework for the present study is that very little theory building has taken place in this niche area of language resource center research. Indeed, Roby's (2004) overview of LRC related research during the 20th century includes virtually no discussion of theory at all. As perhaps the most recent example of this theoretical void is Kronenberg's (2017) edited volume on language centers of the past, present, and future. Of the ten chapters in the volume, only three make any substantial mention of theory. Scott and Hughes' (2017) chapter is the first to do so as they framed their discussion of the language center around the theory of multi-competence (Cook, 1991) and the theory of communities of practice (Wenger, 1998). These two theoretical frameworks provide helpful context to Scott and Hughes' (2017) argument that LRCs should serve to debunk the often over idealized native speaker myth and assist in creating spaces for communities of learners to come together in shared spaces. The second chapter to mention any sort of theory makes reference to Larsen-Freeman & Cameron's (2008) discussion of complexity theory as a way to understand their concept of a multi-institutional model for LRCs (Brudermann, Grosbois, & Sarré, 2017). The third and final chapter to integrate theory is the concluding chapter by Kronenberg (2017) himself where he points to Gee (2004) and Lefebvre (1991) as examples of thinking critically about learning spaces. In a book that examines the language centers of the past, present, and future, these few and somewhat fleeting indications of theory are cause for concern about the state of research involving LRCs.

On a related and perhaps similarly concerning note, theory development in the broader field of computer assisted language learning (CALL) research has also suffered from a lack of common frameworks. In 1997, Levy opened his book on CALL by pointing out that, "emerging most strongly in a review of the literature on CALL materials is the lack of a generally accepted theoretical framework that authors can use to guide their work" (p. 4). Over a decade later, Hubbard (2008) conducted a systematic literature review with the goal of understanding the degree to which theory had been discussed in the *Computer Assisted Language Instruction Consortium (CALICO) Journal* since its inception in 1983 up until September of 2007. Dishearteningly, his ultimate conclusions were that although the word "theory" had been used fairly regularly throughout the journal's 25 published volumes, no single or identifiable group of CALL-oriented theories existed. In his final reflections, Hubbard (2008) echoed some of the same concerns expressed earlier by Levy (1997) stating that the apparent lack of an agreed upon theoretical framework or set of frameworks was likely due to the fact that CALL exists as a subdiscipline of the broader field of second language acquisition; a relationship which perpetuates a continual borrowing of tangentially related theories of teaching and learning from the work of psychologists, educational theorists, and applied linguists.

As I have already demonstrated, research on language resource centers has also suffered from this lack of theoretical cohesion. The result is that studies involving LRCs have either ignored theory altogether, like the majority of the chapters in Kronenberg's (2017) recent edited volume, or have relied somewhat tangentially on theories used primarily for other purposes (Brudermann, Grosbois, & Sarré, 2017; Kronenberg, 2017; Scott & Hughes, 2017). To overcome this challenge, and in an effort to break the chain of theory neglect, I sought to frame my dissertation using theories from neighboring disciplines. Figure 2.1 displays the three disciplines and the relevant theories that framed this study.

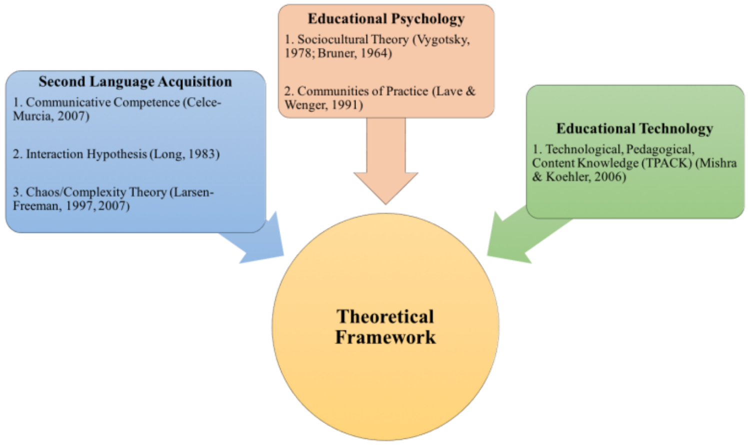

Figure 2.1. Theoretical Framework and Disciplinary Contributions

This multi-theory framework, as demonstrated in Figure 2.1, combines key theories from three related disciplines. As I have already outlined, this theoretical borrowing has been quite the norm in the area of CALL and LRC research. Pond (1967) provided an indication that this borrowing has been going on for many decades now as he explained that to understand the role of the language laboratory, "we must look at the field of learning theories, and secondly, at the field of applied linguistics" (p. 11). Synthesizing three key areas of literature, this dissertation draws flexibly from these areas to study form, function, and relevance of LRCs as demonstrated in Figure 2.1. Although I would have much rather adopted a single, all-encompassing theoretical framework for this dissertation, the truth is that there simply was no adequate model available. However, in my quest to find one, I inevitably came across theories in related fields that appeared to be promising candidates for the job. In the following sections, I discuss how each of these potential theoretical frameworks contributed partially, but never fully, to the present study.

One potential and existing candidate was the Technological Pedagogical and Content Knowledge (TPACK) framework by Mishra & Koehler (2006). In describing TPACK Mishra and Koehler argued that technology-based practices needed to take into account issues pertaining to both pedagogy as well as content knowledge. Furthermore, they demonstrated how each of these three areas were intimately related to one another. The combination of tool, pedagogy, and content knowledge expertise struck me as particularly helpful in thinking about possible frameworks for the present study. However, the TPACK framework, although well suited for issues related to teaching with technology and CALL-oriented professional development, did little to address the specific issues pertaining to language learning and language resource centers. Consequently, I began to look elsewhere for a more comprehensive framework.

In my search for a framework that could accommodate issues pertaining to technology from the learner's perspective, I found the work carried out in educational psychology to be particularly helpful. From this discipline emerged the understanding that learning is a cultural (Bruner, 1964) and social (Vygotsky, 1978) phenomenon. Driscoll's (2005) discussion of work by Bruner and Vygotsky made reference to the important role of social and cultural tools. She wrote that, "like Bruner, Vygotsky considered the development of intelligence to be the internalization of the tools of one's culture. But tools emerge and change as cultures develop and change" (2005, p. 249). The triangular relationship between social, cultural, and technological (or tool-based) ways of knowing certainly held appeal as a potential theoretical model for the present study. However, even in combination with Mishra and Koehler's (2006) TPACK framework, there was still the question of relevance to the field of foreign language education.

Neither of these models had been specially designed for language acquisition and so fell short of a fully comprehensive theoretical framework for what I hoped to accomplish with this project. In order to supplement this missing link, I turned to theories in second language acquisition (SLA) in hopes of finding a suitable model for my study.

Having taught several courses in SLA theory and practice, my search for potentially suitable theoretical models in this discipline was much less strenuous than my searches in the areas of educational psychology and educational technology. It was not long before I had decided on the notion of communicative competence (Celce-Murcia, 2007) and the Interaction Hypothesis (Long, 1983) as possible theories to help frame my dissertation. However, despite the strength of these hypotheses in the field of SLA, they too failed to meet the complex needs of this study. I found that I was still in need of a framework that could account for the continually evolving paradigms of technology, methodology, society, and culture. The last theory to inform this study seemed to specifically address the difficulty of understanding complex phenomena, particularly within unstable contexts. Here, Larsen-Freeman (1997, 2007) has shed light on the possibility of adapting Chaos/Complexity Theory as a possible unifying framework for the field of second language acquisition. She convincingly argues that language, as a system, exhibits many properties that adhere to the main tenets of the theory; mainly the system’s propensity to deviate from predictable norms and to evolve over time. Still, this connection between Chaos/Complexity Theory and the broader field of applied linguistics is not fully developed. Consequently, rather than forcing my study into one single theoretical box, I chose to include Chaos/Complexity Theory as yet another influential part to the overall guiding framework for my investigation.

Theoretical framework(s)

In the end, I decided to approach my study using a combination of the theories outlined above and highlighted in Figure 2.1. This multi-theory framework is reflective of the heterogeneous nature of language centers themselves. In thinking about the evolution of language laboratory to language center, it is clear that the 21st century LRC has survived because of its technological, methodological, and sociocultural flexibility (Liddell & Garrett, 2004). Ledgerwood (2017) summarized this point well when he wrote the following:

> Language centers are amazingly flexible and adaptable places. What were originally laboratories have morphed over the years into resource centers and now forums and studios. As language methodology has changed over the years due to advances in second language acquisition theory and research so have language centers. (p. 6)

Societies, cultures, technologies, and methodologies are in a constant state of change. Although the rate of change might differ (technology has typically changed at a faster rate than methodology), this constant flux is precisely what unites these seemingly unique processes. Consequently, any institution that stands at the crossroads between these four areas must be willing to adapt and change. Furthermore, any attempts to investigate these institutions through research must remain equally agile. In the following sections, I describe how each related theory was subsumed into the theoretical framework for this study.

To begin, Vygotsky (1978) and Bruner (1964) explained how knowledge is both socially and culturally constructed. Bruner (1964), in particular, emphasized that these constructions are constantly being altered and modified due to the ever-evolving nature of technological tools. These theories are extremely relevant to LRCs as they continue to evolve as spaces where opportunities for social and cultural interactions are facilitated through a combination of face-to-face, hybrid, and online spaces. The second theory to come from the field of educational psychology is the concept of communities of practice (Lave & Wenger, 1991). Within this broader framework it is important to note the specific notion that members of a community of practice are in constant flux between the community's peripheral and insider membership ranks (Lave & Wenger, 1991). In terms of the LRC community, membership possibilities include teacher, student, and LRC staff. As students and teachers become more adept in their abilities to teach and learn languages, they are able to move closer towards insider status. Some even become so proficient that they then become community brokers where they are able to act as emissaries between peripheral and insider community members (Lave & Wenger, 1991). This idea of fluid and constant movement of a community's members is subsumed into the overall framework which informed the study's design. In addition to these two educational psychology theories, additional theories coming from the areas of second language acquisition and CALL help to shed light on LRC related research.

From educational technology comes another important building block: Mishra and Koehler's (2006) TPACK model. The model elevates technology towards a more equal partnership with the long-standing notions of pedagogy and content knowledge. In terms of the LRC, there seems to be a paradigmatic shift underway to transform the once tech-heavy institution into a more well-rounded resource center that aims to provide assistance in technology, pedagogy and, on occasion, content knowledge as well (Angell, DuBravac, Gonglewski, 2007). This focus on the balance between tool, method, and content was also taken into account in the formation of the overall framework. Finally, insights from two influential SLA theories played important roles in the creation of the new framework.

From the field of second language acquisition, Larsen-Freeman's (1997, 2007) adaptation of Chaos/Complexity Theory for language as a system was particularly helpful. Both Long (1983) and Celce-Murcia (2007) offer additional models for how to think about the process of acquiring a second language. In retrospect, Long's theory that languages are best acquired through a sort of conversational negotiation of meaning seems quite simple by today's methodological standards. Long's hypothesis stands as a sort of amalgam of Krashen's Input Hypothesis (1982) and the later articulated Output Hypothesis by Swain (1995). Both of these hypotheses stressed the importance of comprehensible communication, the former with an emphasis on language processing and the latter on language production. Interestingly, these seminal theories in second language acquisition are almost always discussed in relation to Vygotsky's (1978) Zone of Proximal Development (Shrum & Glisan, 2015). The idea of communicatively stretching just beyond one's current level of proficiency to the next level of understanding fits very well within Vygotsky's (1978) discussion of actual and potential developmental levels. In light of these connections, I have come full circle in my treatment of the contributing theories that combine to inform the present investigation of language resource centers. Figure 2.2 provides a visualization for how the related theories contributed to this dissertation.

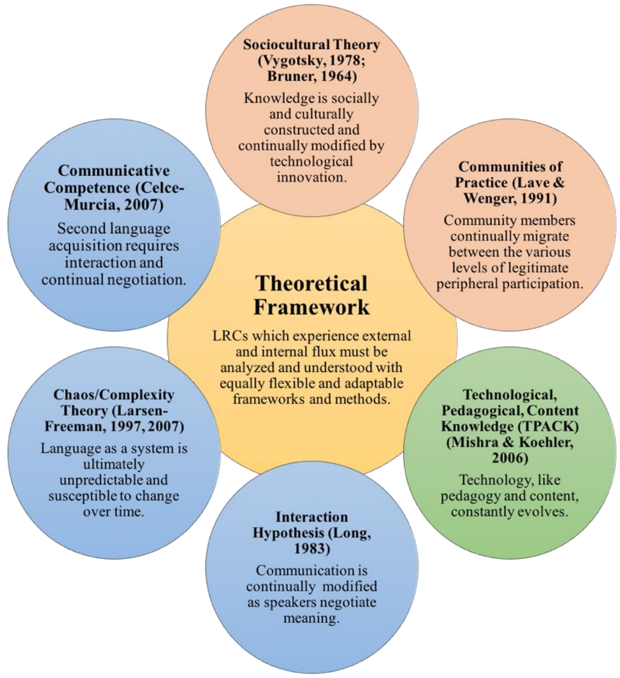

Figure 2.2. Theoretical Framework and Related Theoretical Contributions

As Figure 2.2 demonstrates, the theoretical framework for this study aims to account for constant fluctuations in the areas of technology, methodology, society, and culture. In doing so, it draws from theories that all, to some degree, encompass the idea of constant change. The framework demands flexibility and adaptability throughout the entire research process from initial inquiry to subsequent data-driven conclusions. As I will highlight in the following chapter, the methodological decisions I made in this study were influenced by this multi-theory framework. Furthermore, the conclusions I offer in the final chapter of this dissertation will be framed within this same context.

Conceptual Framework

Although research involving LRCs and related topics has struggled to identify reliable theoretical frameworks, a number of strong conceptual frameworks are more readily available. Chief among these examples are Kronenberg's (2017) edited volume on LRCs and Roby's (2004) chapter on the same subject. Both frameworks offer ways to divide the complex history of LRC research into more digestible components. Kronenberg (2017) described the conceptual organization of his edited volume in the following manner:

> The volume is loosely divided into three sections: the past, present, and future of the language center. This is not a strict division; all chapters reflect on the past, the present, and the future in some ways. But in order to bring some order to chaos, this editor used these categories to order the different viewpoints. (p. 1)

This explanation rings true throughout the text as the various contributors often cross chronological boundaries in their treatment of past, present, and future LRC models. This chronological ordering of content, despite the potential problems with oversimplification, successfully groups the chapters into more digestible categories. The decision to divide LRC research chronologically was also made by Roby (2004) in his chapter on the evolution of the language laboratory. However, the two sources differ in that Roby's review of LRC related findings utilizes a much more detailed division between the markers of past, present, and future.

Roby's (2004) conceptual framework can be found in his review of literature on the effectiveness of the language laboratory. The three-part chronologically ordered framework begins with what he referred to as the forerunners to the language laboratory. The first division begins with the invention of the phonograph in 1877 and concludes with the end of World War II in 1946. As for the second chronological division, Roby discussed literature from 1946 to 1958, a time which he referred to as the "postwar and pre-NDEA period" (p. 530). The decision to end this second division with the establishment of the National Defense Education Act (NDEA) is not surprising given the legislation's important role in the history of language laboratories. The third and final section addresses studies from 1959 to the "present" with the last inclusion being a study published in 1980. Apart from these two examples of conceptual frameworks, a few other models are also worth mentioning here.

A number of articles published on language resource centers have adopted more of an anecdotally focused conceptual framework. For example, Angell, DuBravac, and Gonglewski (2007) each spent time highlighting their own experiences as LRC directors at three different institutions. This action research oriented approach to inquiry can be found in recent LRC publications (Yaden & Evans, 2017; Sun, 2017) as well as those of the past (Lyman-Hager, 1990; Waltz, 1930; Wang, 2006). Other studies on language laboratories have taken a more didactic approach and have employed conceptual frameworks that were built around practical concerns with designing, implementing, and evaluating language centers (Kronenberg & Lahaie, 2011; Ross, 2013; Simon, Kraemer, Kronenberg, Lavolette, & Sartiaux, 2017). Of these available conceptual frameworks, the chronologically defined models, as implemented by Kronenberg (2017) and Roby (2004) served as the main references for the development of the current conceptual framework for this study.

After considering the possible conceptual frameworks for this dissertation, I settled on the decision to organize the inquiry into three chronologically defined sections: past, present, and future. However, in order to fully address the goals of this study, I then expanded these divisions into three additional content-driven segments. These content dividers derive from the guiding research questions of the study and refer to form, function, and relevance of LRCs. Thus, the conceptual framework for this study is first divided topically and second, chronologically. Figure 2.3 offers a visualization of this multi-layered conceptual framework.

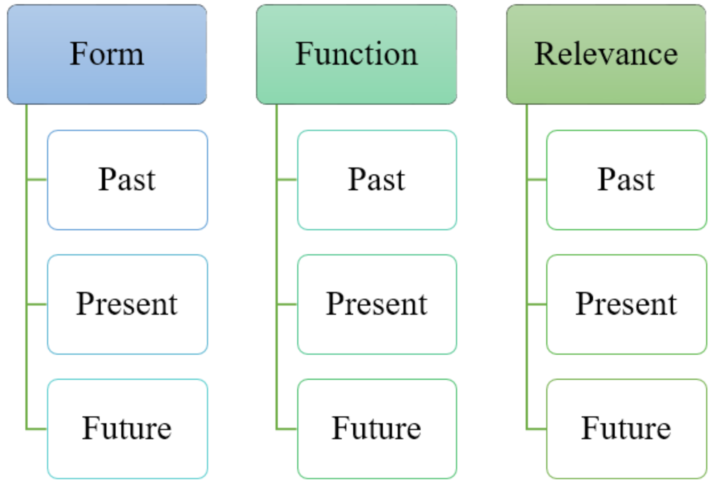

Figure 2.3. Conceptual Framework

The conceptual framework represented in Figure 2.3 will be used to organize this study in such a way that invites reflection of the past, assessment of the present, and planning for the future. Not only was this framework utilized in the subsequent sections of this chapter but it also served as an overarching organizer for the conclusions I offer in the final chapter of this dissertation. The difference between how the framework is used in this chapter and the form it takes in the final chapter has to do with the emphasis given on the past and future time markers. For example, past examples of form, function, and relevance play center stage in this review of literature. However, as I discuss my conclusions to the project, my focus shifts toward present and even future LRC models. In any case, the multi-layered framework helps to contextualize both discussions.

Review of Relevant Literature

The following discussion of LRC literature will be organized according to the conceptual framework as outline above. As you trace the evolution from laboratory to center, noticeable changes can be observed with respect to form, function, and relevance. However, I must emphasize again the fact that the border between these three topics is not clear cut. Some authors address all three of these issues in one study while others focus their attention on one particular aspect or timeframe. Before beginning my overview, it is necessary to clarify what is meant by form, function, and relevance. Furthermore, I shall take just a moment to provide a sense of how I define the chronological markers of past, present, and future, inasmuch as they pertain to the current study of LRCs.

As for form, I am referring to the various aspects of how a laboratory or center is organized. This notion of organization is not limited to administrative structure, staffing, or oversight but rather includes the actual composition of the space occupied be it physical, virtual, or hybrid in nature. As for function, I refer to the various activities that LRCs perform. At certain intervals throughout the history of LRCs, these functions were relatively cohesive and well understood. However, recently, activities and responsibilities assigned to LRCs are of increasing complexity and can range from hosting online target language rap competitions (Urlaub & Kautz, 2011) to community outreach into public schools (Primov & Clark, 2005). Finally, with respect to relevance, I refer specifically to indications of how LRCs are serving to benefit the efforts of teaching and learning foreign languages. Of course, the flip side to this, the irrelevance of LRCs to foreign language education, will also be examined.

The defining of the chronological markers, past, present, and future, was somewhat of a surprisingly difficult endeavor. For example, what might be considered past from my perspective was spoken of from the vantage point of present and sometimes even future for those writing about these issues in past decades. Although some models for how to distinguish between these categories were available (Kronenberg, 2017; Roby, 2004), each seemed to be slightly off the mark for the purposes of this study. I needed both the chronological specificity employed by Roby and the flexibility of Kronenberg's descriptors. Ultimately, I settled on distinctions that drew from both models. As a chronological distinction between past and present I use the turn of the century as a loosely interpreted partition. For future, I include any discussion that refers to models of LRCs either not yet in existence or that have not yet been widely adopted or normalized. With the variables of form, function, and relevance somewhat operationalized and the time markers of past, present, and future articulated, it is now time to turn to the relevant LRC literature.

Form

From the birth of the LRC in the early 20th century to the last few decades of the millennium, there were not many organizational differences among language laboratories. Again, Waltz's (1930) article offers a helpful description for what these early language laboratories might have been like. He wrote:

> Each listening machine is a unit. As many as forty students could use a single unit or machine at one time. However, for our purposes we have fixed on a table seating 16 students. The table is 13 feet 4 inches long and 2 feet 9 inches in height. The width is 3 feet. The table is divided into compartments by a thin 18 inch board running down the center and boards of the same material running at right angles. (p. 28)

In subsequent publications discussing these early labs, not much with respect to form and organization changed over the years. Even as late as 1992, Williams could still offer her telling description of a similarly organized language laboratory that she inherited at the University of Notre Dame. The space, like many others of its time, consisted of rows of tables divided by individual listening carrels (Williams, 1992). In her description of the former lab she wrote:

> Many instructors . . . generally put a tape in the console and graded papers while the students were put through their paces. One, who is no longer here, used to drink coffee and read the newspaper at the console. He didn't notice that his students weren't repeating. To be fair, teachers who tried to use these consoles in some sort of interactive way found that one switch would often disconnect five or more students, connect some random number of students to each other, or send a high-pitched whistling noise into the ears of 25 unsuspecting aspirants to the German subjunctive" (p. 75).

With the aid of a substantial grant, Williams was later able to convert the audiolingual-oriented space into a center that accommodated not only audio resources but also video materials and an overhead projector. There was, however, some evidence that not everyone was under the same impression as to what a language laboratory was or how it was to be organized. Capretz (1969) wrote of this confusion saying that:

> First of all nobody really knows what a language laboratory is. So many various and sundry conglomerations of equipment go under that name, that in order to find what is common to all of them, and makes them language laboratories, you have to get down to features so general that they mean very little. (p. 33)

Although, as Capretz pointed out, variations in language laboratories must have existed among the early models, the visual image of individual listening stations where students would sit for extended periods of time repeating phrases and listening to scripts continues to prevail even today. This organization was, no doubt, closely linked to the prevailing methodology of the day. These were methods that did not require social human interaction but rather emphasized high volumes of drilled memorization oriented around the modalities of speaking and listening (Shrum & Glisan, 2015). However, as methodologies began to evolve from drill-based isolated practices to socially oriented activities, so too did the organization of the language laboratory.

What was once a centralized location providing access to oral/aural technologies, the language laboratory eventually began to take on new forms. These later iterations came about as technologies like the Sony Walkman and the laptop computer disrupted the long-standing need for students to congregate around a centrally located technologically rich facility. Otto (1989) described the portability of the Walkman and its relevance to the traditional language laboratory in this manner: “These student-owned machines can be exploited as portable audio labs. Language learners can be released from the bonds of language lab carrels by learning centers or libraries that provide copies of audio programs for use on personal tape players” (p. 23). Twenty years prior to Otto’s chapter, Barrutia (1967) presciently wrote that mobile technologies like the portable radio would lead to the establishment of a “laboratory without walls” and that the breakthrough would “hasten the decentralization of the live bodies and the centralization of all teaching information” (p. 895). However, this decentralization of the laboratory would be slow to occur with discussions of fully online or virtual laboratories emerging as viable possibilities only after the turn of the century.

Towards the end of the 20th century, Gölz (1999) published an article where he discussed early models of distance education courses which could harness the power of the World Wide Web to facilitate teacher to student and even student to student interactions. Doyle (2000) reported on a study carried out at Harvard’s language resource center where analog materials were digitized and streamed into student dormitories. Ironically, some students who were surveyed about the new setup expressed a preference to visit the LRC in its physical location in the library for two reasons in particular: 1) the dorms were often too noisy and distracting and 2) they sometimes felt uncomfortable fumbling on in a foreign language with other students in the dorm listening in. At least from Doyle’s report, it seemed like there were still obstacles and barriers to overcome in the decentralization of the physical LRC. Still, these discussions of physical space seemed to weigh heavy on the minds of LRC professionals. These concerns can be noted, for example, in an article by Garrett (1997) where she wrote the following:

> We need to think even further ahead, past the issue of whether ‘our space’ is to be dedicated to language learning or opened up to other disciplines. We need to anticipate that in the not-too-distant future our facilities may to a considerable extent disappear as dedicated physical spaces. Many campuses now have central servers and networks connecting libraries, dorms, and classrooms, so that students can accomplish much of their textual computing without coming into general purpose computing labs. As yet, however, we can't easily or inexpensively deliver multimedia over these networks, and we can't count on all our students having audio and video capabilities on their dorm or home computers, but those obstacles will disappear within the next few years. At the point when campuses have a fair number of networked classrooms capable of receiving and showing multimedia, they are likely to stop maintaining specialized facilities. And we won't be able to prevent language labs from disappearing simply by voicing indignant protest; we need to articulate cogent reasons why they should continue. (p. 27)

Garrett’s concerns were later reflected in a question posed by Burston (2003) where he asked, “When all its resources are finally available from anywhere on campus, what justification will there be for maintaining a center as a physical entity” (p. 23)? In answer to these questions and concerns, a number of articles would later be published on the topic of the virtual language laboratory.

One of the first to address this notion of a virtual language laboratory was Yang (2004) who referred to the model as a “web-based virtual language center” (p. 41). Yang described the benefits of such a place-free institution writing that the model, “offers students obvious convenience of time and location” and that students could “attend lab at any time they want (it is open 24 hours a day, 7 days a week) and from any location where they have a networked multimedia computer” (p. 41). However, in his article, Yang would also admit to the limitations of such a center expressing concerns with connection speeds, and the limited ability to provide a truly communicative learning environment for language students. Years went by and these limitations slowly faded away with the progress made in language learning and technology. These improvements led MacDonald to publish an article in 2011 titled "The 'Virtual Language Lab' Virtually Painless, Simply Real." She described her idea of a virtual language lab as "a portable, digital space that is liberated by the individuality of learners and teachers and finds expression in pluri-dimensional, multi-channel technological applications" (p. 146). Faced with budgetary constraints that limited the availability of physical and technological resources, the virtual language lab offered a way for MacDonald to access the benefits of a language center at an institution where no physical entity existed. It must be noted, however, that this idea of a decentralized virtual space poses a potential threat to those whose professional lives are grounded in the physical language center. To those concerned with these issues, MacDonald offered an excellent caveat for the complete replacement of physical centers as she argued the following:

> One final suggestion: do not abandon the idea of a traditional language lab facility just because there is a lot of free stuff out there. Despite everything above, I am still pushing for a dedicated lab space for our department. Whether we designate it a Language Learning Center, a Language Lab, or a Technology Assisted Foreign Language Study Room, it would still be nice to have someplace to call our own, with a director that could be dedicated to keeping our entire department and all our students abreast of the most recent technology and the most contemporary pedagogy that will drive its use. Until then, the Virtual Language Laboratory is something functional for the overworked, underfunded, and perhaps under-prepared non-expert without a tech degree or huge quantities of expertise and time. (p. 156)

MacDonald's parting thoughts underscore another key element in the design and organization of language centers today and that is that the 21st century LRC is intimately tied to the unique cultures of the departments, colleges, and universities in which they are housed. Tchaïcha (2003) discussed this particular idea at length as she carefully outlined steps to designing a center for a particular institution. Tchaïcha highlighted the benefits of gathering input from internal as well as external constituents, visiting other language centers, and taking into account financial details before implementing a new language center.

As I trace the organization of LRCs form present time backwards, various models can be identified. What was once an exclusively physical space has recently begun to take on more of a hybridized form as evolving technologies have allowed for place-free learning to occur. The next potential shift in form and organization may very well be towards a completely virtual space not unlike those discussed at length by MacDonald (2011) and Yang (2004). And yet, even despite technological and methodological advances, the human element of foreign language education is an important one. Perhaps only time will tell whether or not computer assisted language learning will ever be able to sufficiently facilitate the millions of data points exchanged in a single face-to-face conversation.

Function

To a certain degree, function appears to be derivative of form. For example, it is easy to see how one function of the early language laboratories, particularly given their physical layout of individual listening booths, was to encourage isolated speaking and listening practice. Similar connections between form and function can be made for the hybridized and even virtual models of language resource centers. However, in order to reach an even deeper understanding of the various functions performed by language laboratories and centers, let us turn to the relevant literature as evidence and example for how these spaces were used. The connection between the early language lab and the

Audiolingual Method of foreign language education has been well documented in recent publications (Kronenberg, 2014; Roby, 2004; Scinicariello, 1997). An analysis of articles published during this particular chapter in LRC history adds an even more detailed understanding of how the language laboratory accommodated the Audiolingual Method's focus on listening and speaking. Pond's article regarding the language laboratory (1967) offered such an account. Regarding learning objectives, Pond wrote:

> A more realistic goal might be stated as follows: You will have to respond correctly, orally and without hesitation to all the stimulus sentences in Exercise C of Lesson 29 with books closed. If the term correctly, as used in stating this goal, must be defined, the student can be told that a correct answer means an answer identical to the taped confirmations. (p. 12)

The rigidity of the Audiolingual Method is clear in Pond's call for more specific educational goals. As I continued my search for publications from this era, I was surprised to find a collection of growing discontent towards the powerfully influential Audiolingual Method. Just a year after Pond's publication Valette (1968) offered these insightful words:

> We must wrench ourselves out of the stimulus-response straight-jacket and accept a more balanced view of language learning. We must provide students with accurate models, but we must also give them some leeway to make mistakes and to learn from those mistakes. We must allow for creative intellectual activity in addition to the intensive exercise of memorization and drill. (p. 5)

Just a year after Valette's article, Reinert (1969) would offer continued support for thinking about the language laboratory as more than just a place for drilled input and output. In encouraging others to think more broadly about the possible functions of the language laboratory, Reinert argued the following:

> The language lab may serve two different functions: the lab may be used as the untiring drill master, and it may also be used creatively to stimulate interest and facility among the students. Far too often this expensive, sophisticated tool has

> been used only for drill work and its creative possibilities have been ignored. (p. 58)

As an example of one of these creative possibilities, Reinert suggests the use of children's records arguing that their simplified syntax, variety of character voices, and inclusion of a story or narrative can help to keep students engaged during lab sessions. A second creative possibility discussed by Reinert included the use of the laboratory as a place for assessment. Thus, calls for a broader application of language learning and technology were evident even during the golden era of language labs and the Audiolingual Method. And yet, as often is the case, praxis rumbled on at a business-as-usual pace well into the latter years of the 20th century.

As for present and relatively recent functions of language centers, some of the best insights into these operations came from the presentations at the recent IALLT conference at Concordia College. A great variety of LRC functions were discussed in the various sessions throughout the conference. These included a language coaching program run by the language resource center at American University that works to pair native speakers with language students for additional opportunities to use the language in real social settings (Cruz, 2017). In another session, Ettzevoglou and Rosen (2017) highlighted various online programs like Kahoot and Quizalize which can provide automated reports which can then inform efforts in differentiated instruction. Other LRC functions have been noted in the professional literature.

Both Sawhill (2008) and MacDonald (2011) discussed the role of the LRC in facilitating interactions through the growing body of social media platforms. Specifically, Sawhill wrote:

> To learn a language with the assistance of social software and communicative technologies in the 21st century classroom, we will provide our students with a sense of cohesiveness that our traditional learning space, a classroom enclosed by four walls, simply cannot provide By welcoming and celebrating a multiplicity of perspectives, a cacophony of voices, different and differing worlds, cultures, and languages we not only improve our teaching, but we also better prepare our students for the world that awaits them. (pp. 15-16)

Another emerging function of the LRC is to assist in online and hybrid styles of learning. This is particularly evident in videoconferencing programs. Both MacDonald (2011) and Coverdale-Jones (2000) discussed the communicative benefits of videoconferencing technology and the role that the LRC can play in providing professional development for teachers and students in this area. Finally, a few researchers have offered insights into future possibilities regarding how an LRC might function within future technological, methodological, and pedagogical contexts.

A number of chapters included in Kronenberg's (2017) edited volume offer suggestions for potential future LRC functions. These include chapters on the role of the LRC as support for non-tenure track professional development (Van Deusen-Scholl & Young, 2017), a support center for student and faculty research (Sun, 2017), and as champion for the efforts involving language for specific purposes (Stone, 2017). In addition to these bold new directions, there seems to be a general drift towards the utilization of the LRC as a social space where human to human interactions are encouraged and amplified through the support of CALL based technologies (Kronenberg, 2016; Jeanneau, 2017, Yaden & Evans, 2017).

Compared to past functions of the language laboratory, it is clear that present and future functionality exhibits much more variability. In light of this increase in variability of function, additional research is needed to understand these new directions and to assess their contributions to the overall efforts of teaching and learning languages. Identifying, describing, and assessing these new trends will no doubt prove to be quite a challenge for LRC researchers. However, in order to avoid the pitfalls of the past, the current trends in language centers need to be documented. Finally, one last area of the literature requires attention. I turn now to an overview of past, present, and future discussions of relevance.

Relevance

For this final section of the literature review, I turn my attention to the issue of relevance. Specifically, I am referring to the relevance of the language laboratory and language center to the overall mission of foreign language education. As one might suspect, the notion of relevance entails a heavy dose of contextual subjectivity. For example, the degree to which a particular center is relevant to the institution that it serves depends largely on the nature of the two related entities. In other words, one particular model of LRC may be extremely relevant to one institution and not relevant at all to another. This mismatch in relevance is no doubt a byproduct of the increasing diversification of the form and function of the 21st century language resource center. Nevertheless, interesting insights can be gleaned by exploring the issue of relevance throughout the history of the language resource center.

As I have already established, the methodological and pedagogical climate of the early language laboratories was largely defined by the Audiolingual Method. Therefore, any discussion of relevance from this era must take into account the dominant foreign language education paradigm of the time. In this sense, the form and function of the early laboratory appears to be quite relevant its corresponding methodological climate. For example, Hocking (1964) describes the exercise of pattern drills as being “an excellent example of using the equipment to best advantage" (p. 33). Hocking described these pattern drills in the following way: "Contrastive studies of two languages established the 'points of interference,' and these became the subject of drills which focused attention on a single item, the manipulation of which involved only one aspect of an otherwise unchanging pattern (p. 33). In further clarification, Hocking wrote that "the elimination of all other variables and the extreme repetition and concentration upon a single item doubtless provided an effective learning situation" (p. 33). These sentiments from Hocking suggest that the language laboratory, as a place where these pattern drills could be carried out, was highly relevant to foreign language teaching at that time. However, it was not long before hints of a mismatch between technology and methodology started to emerge.

Capretz (1969) questioned the utility of the technologically bloated laboratory writing that "too often we have installed more hardware than could be used efficiently, or that we knew how to use efficiently, and we have become enslaved to our hardware" (p. 34). That same year, Glenn (1969) argued for the utilization of the language laboratory as more than just a hub for technology. In her call to use the lab as a professional development space, Glenn wrote, "Unfortunately, many of the language laboratories are being used little or not at all" (p. 15). As an additional indication of this decline in relevance, the main journal for language laboratory professionals, the *NALLD Journal* (later known as the *IALL Journal*), appeared to be going through some rough times as the last few decades of the 20th century began to wind down. For example, in 1986 issue of the journal, the un-named editor wrote

> This is the last issue of the NALLD Journal. IALL has had a difficult time keeping the publication going. Assembling three issues a year is a tough job.

> When membership interest in submitting contributions dwindles and the editor position is not filled, publication gets behind. (p. 2)

The next issue to emerge after the gap was published in 1990 and commenced with the inauguration of a new journal editor, Read Gilgen. Gilgen (1990), as new editor of the newly named *IALL Journal* began his tenure with an optimistic introduction to the issue which boasted an impressive six featured articles as well as a number of specialty columns on various topics. Interestingly, just two years later, Gilgen's introduction to the 1992 issue of the journal again reflected a more somber tone for those associated with language laboratories and language centers. In his editor's note, Giglen (1992) wrote:

> Once again the journal is a bit tardy . . . Part can be attributed to busy schedules, but frankly it's difficult to put out a journal on time when there are so few submissions. We need your articles, reviews, notes, comments. And not because we the journal staff need them, but because we IALL members need them. Please, examine what it is you're doing and share that with the rest of us. (p. 3)

Admittedly, these somewhat circumstantial indications of declining relevance cannot be taken as entirely representative of the times. However, sentiments expressed in other publications at the time suggest that these underlying tensions were not terribly far from the mark.

Lyman-Hager's (1992) article suggested as much. Lyman-Hager reflected on this time of transitioning relevance as she wrote that, "most institutions, even those where the most up-to-date thinking about language pedagogy and methodology takes place, have antiquated and poorly supported language learning centers" (pp. 7-8). With specific reference to the mismatch between the traditional laboratory and the evolving methodologies of the time, Lyman-Hager (1992) wrote bluntly saying:

> Like it or not, that language laboratory is 'dead' because its pedagogical and methodological underpinnings, and its very 'raison d'etre,' are no longer valid.

> The ruling pedagogical assumptions of today's language departments center around ‘communicative competence,’ or, in the alternative, ‘proficiency.’ (p. 8)

The mention here of communicative competence may be seen as a sign of significant transition between the language laboratory and the language resource center. This methodological emphasis on interpersonal communication proved to be quite a disruptive concept for the once audiolingual-oriented language lab. With this new shift in methodology came another wave of thought regarding LRCs and their relevance to the evolving pedagogical climate in foreign language education.

More recent discussions involving relevance tend to be centered around the idea of flexibility. There are ongoing discussions about the flexibility of facilities and furnishings (Kronenberg, 2017), technologies (Burston, 2003), and functions like those discussed in the 2013 edited volume by Ross and published by IALLT. Embedded within these discussions is the notion that the language center is a unique reflection of its equally unique home institution. Given this level of variability, organizational flexibility must naturally play a central role in maintaining relevance. This particular concept is not entirely new. On this subject, Otto (1989) suggested the following steps to designing new and relevant language centers:

> Decisions about what to include in an effective lab for any given institution are contingent on a number of factors: (1) the teaching methods the faculty subscribe to, (2) the number of students to be served, (3) the size of the institution, (4) the general availability of resources from other units (computer center, library, video center), and (5) the administration’s philosophy on technology and education. (p.15)

Given this recognized individuality of the modern 21st century language center, each center must begin to evaluate what they do, how they do it, and whether any of those things are effective. Although the literature involving LRCs goes back to the first few decades of the 20th century, a surprisingly scant amount of rigorous scholarship has been produced on these topics. The bulk of what is available comes in the form of individual case studies, personal ethnographies, and/or action research projects. These contributions are excellent sources of information but their findings need to be corroborated with additional qualitative and quantitative measures.

Conclusion

As the language center continues to evolve, so must methodologies for examining these institutions. Given the complex and flexible nature of contemporary language resource centers, I outlined a theoretical framework for this study which pulls from a number of relevant but ultimately incomprehensive theories. Following my discussion of this multi-theory framework, I introduced the conceptual framework for the present study. Not only does the conceptual framework help to organize this review of the literature but it provided a helpful way to think about the findings that emerged from this study of LRCs. As I mentioned, the conclusions of this study are also framed within the two-tiered conceptual model, albeit with a greater emphasis on present and future models of language centers. Following my discussion of the theoretical and conceptual models, I then proceeded to discuss past LRC literature, making particular reference to those studies that seemed most relevant to the goals of this dissertation. The review was broken up first by content and then by time period. As this overview demonstrates, there is currently a critical need for additional rigorous analyses of the various models of LRCs that are in existence today. This review of the literature has revealed the incredible institutional flexibility of the language center but has also shed light on the overreliance on isolated case studies in the examination of these institutions. Thus, perhaps the most important finding of this review, is that additional qualitative and quantitative measures are needed in order to deepen the collective understanding of how various LRC forms and functions contribute (or fail to contribute) effectively to the overall mission of foreign language education.

CHAPTER THREE: METHODOLOGY

The purpose of this dissertation was to better understand the form, function, and relevance of today's language resource centers (LRCs). Those that have attempted to investigate these institutions have typically done so by relying on their own personal experiences as well as relevant historical contexts (Barrutia, 1967; Hagen, 2017; Ledgerwood, 2017). Others have sought deeper understanding by relying on survey data administered to LRC professionals (Kronenberg, 2014, 2016). Still others have relied on combinations of these methods in their work (Hocking, 1964; Roby, 2004). This dissertation followed a qualitative path of inquiry as it sought answers to the following questions:

1. How has the organization of language resource centers changed over time?
2. In what ways, if any, do language resource centers contribute to the efforts of foreign language teaching and learning?
3. How are language resource centers still relevant, if at all, today?

These three research questions do not necessarily represent discrete units of analysis. On the contrary, an understanding of organization, for example, informs both function and relevance. In essence, there is a natural and helpful overlap between the form, function, and relevance of the LRC. The exact nature of the relationship between these three questions constitute a sort of exploratory hypothesis as explained by O'Leary (2010) where she argued that a hypothesis is a "logical conjecture (hunch or educated guess) about the nature of relationships between two or more variables expressed in the form of a testable statement" (p. 55). In a further clarification between research questions and hypotheses, Mackey and Gass (2005) stated that "research questions are the questions for which answers are being sought, whereas research hypotheses can be used to express what the researcher expects the results of the investigation to be" (p. 19). Given these clarifications, I submit that the first two of these questions are much closer to Mackey and Gass' (2005) description of a research question. The third question, albeit with a slight modification in syntax, would be a much better fit for what O'Leary (2010) called a hypothesis. Consequently, the hypothesis based on research question three was formulated as such:

1. Language resource centers continually employ organizational and functional flexibility as they strive to maintain relevance within the current models of foreign language education.

The notion of relevance usually suggests a binary interpretation of the relationship between one concept and another. In this case, for example, language centers would either be relevant or irrelevant to the field of foreign language education. However, it is my prediction that the actual results will not be so simple.

In this chapter, I outline the methodological decisions that were made in order to answer these foundational questions. I begin by grounding my decisions in Creswell's (2013) four philosophical assumptions of qualitative studies. Next, I highlight the specific qualitative approach as well as the data collection tools I used in this study. Finally, I end the chapter by providing a brief overview of the 10 interview participants as well as the five language centers they represented.

Four Philosophical Assumptions of Qualitative Studies

As I demonstrated in the introductory chapter to this dissertation, LRCs often represent complex and highly varied institutions. Researchers investigating LRCs of a wide array of methodological tools in their pursuit of knowledge. For the most part, research in this area has leaned heavily on qualitative methods. In arguing the merits of using qualitative methods to better understand complex language learning phenomena, Stickler and Hampel (2015) wrote the following:

> This experience of 'cultural relativism' can help our research to become more open, more varied, and – ultimately – more relevant. Leading researchers have been stressing the importance of sociocultural, constructivist and postmodern theories that employ qualitative methodologies or mixed approaches (combining qualitative and quantitative methods) to explore language use by trying to understand it in its particular ecological context. (p. 381)

What is it about language resource center research that seems to lend itself so well to these methods and frameworks? Creswell (2013) described four philosophical assumptions of qualitative research that helps to frame the answer to this question. Table 3.1 is a synthesis of Creswell's (2013) four assumptions as they relate to qualitative methodology in CALL related studies.

Table 3.1. Creswell's (2013) Four Assumptions for Qualitative Research

Assumption	Definition	Relation to language center research
Ontological	Refers to the nature of reality and its characteristics.	LRC research is rooted in complex social phenomena. Approaching these issues from a constructivist perspective can help to account for the multiple realities espoused by those associated with these centers.
Epistemological	Refers to the level of intimacy required between the researcher and the researched in order to draw accurate conclusions about related phenomena.	The use of qualitative methods like interviews and observations allows for the qualitative research to understand LRCs through the eyes of others. Since these practices are so diverse in nature, these multiple perspectives are important and must be sought out by establishing close researcher-participant relationships.
Axiological	Refers to the value laden nature of social research.	The human element is an important aspect of LRC research. Values of the researcher, center personnel, and those served by the center must be accounted for as deeper understanding of complex issues is pursued.
Methodological	Refers to the flexibility required of the researcher and the research design that must be maintained throughout the entire research process.	LRC research deals with constant technological, methodological, and pedagogical change. This ever-present reality of change requires methodological flexibility and a willingness to adapt to unexpected developments in the research process.

I propose that the decisions to employ qualitative methods for LRC research are rooted in Creswell's (2013) ontological philosophical assumption. Creswell explained that the "ontological issue relates to the nature of reality and its characteristics" (p. 20). Furthermore, he argues that "evidence of multiple realities includes the use of multiple forms of evidence in themes using the actual words of different individuals and presenting different perspectives" (p. 20). These realities are extremely complex, ever-changing, and socially constructed (Vygotsky, 1978). Further exacerbating this complexity is the constant and quick rate of technological innovation, particularly within the last thirty years. Additionally, scholars working this field come from many different disciplinary backgrounds. Some approach their work through the lens of theoretical linguistics and others from an applied linguistics perspective. Other researchers in this area come from the fields of education, instructional technology, and second language acquisition. When researchers from these areas come together to talk about issues related to their work, the ways with which they understand their worlds and carry out their work are made bare. The LRC is a microcosm where these multiple realities play out on a daily basis. The spaces these centers occupy (both physical and virtual) serve as a sort of nexus for a myriad of complex interactions between language faculty, technologists, pedagogues, and students. Each brings their own unique perspective, their own reality. For example, within a single LRC, the ideas and beliefs of the center's director intertwine with those of the center's professional staff, the student employees, the faculty who use the space, and the language students who stand to benefit from these efforts. I believe that for these reasons, qualitative research methodologies have been and will continue to be powerful tools for seeking out a deeper understanding of these institutions. Creswell (2013) went on to explain three other philosophical assumptions beyond the ontological that I think are important to note in order to frame the core research decisions of this study.

The remaining three philosophical assumptions of qualitative research that Creswell (2013) discussed included the epistemological, the axiological, and the methodological. Each of these assumptions have been taken into account in this study of LRCs but they are discussed separately from the ontological because their relevance is slightly more peripheral in nature. However, I do not mean to undermine the importance of these other three assumptions as each had an important role to play in the overall development of the project. For example, my decision to travel to some of the LRCs in this study was highly motivated by Creswell’s (2013) argument regarding the epistemological assumption of qualitative research. For this assumption, he says that getting close to participants and understanding their subjective realities is essential. Here Creswell said that it is important to “conduct studies in the ‘field,’ where the participants live and work” (p. 20). Although financial resources limited my ability to visit every center, in the end I was able to visit with individuals from three different LRCs in two different states. In an effort to account for the epistemological assumption, I made efforts to visit these centers so that I could see them with my own eyes as I sought to understand the subjective realities found at each site. Finally, the last two philosophical assumptions of qualitative research that Creswell (2013) discussed included the axiological and methodological assumptions.

In explaining the axiological assumption, Creswell (2013) said that “qualitative inquirers admit the value laden nature of the study and actively report their values and biases as well as the value-laden nature of information gathered from the field” (p. 20). My values and biases are particularly strong in this area of research given my own position as a director of a new LRC. In a direct effort to address this philosophical assumption, the third data collection instrument, reflective journaling (Watt, 2007), was added to the data collection process. Through reflective journaling, I attempted to explore my own biases as the project unfolded in real time. This was a deliberate action motivated by the axiological assumption and implemented as a way to triangulate the other data sources in this study.

Lastly, Creswell (2013) emphasized that qualitative researchers must account for methodological flexibility and be open to revision and redesign as new evidence emerges during data collection and analysis. To emphasize the importance of flexibility, he points to the inductive nature of qualitative research explaining that knowledge emerges precisely from the process of inquiry itself rather than being generated from a preselected theoretical model or perspective. Perhaps the place where methodological flexibility was felt the strongest in the present study was in the semi-structured format of the interviews. The 14 questions that made up the interview protocol were adapted for each interviewee depending on how they were associated with their LRC. For example, one interviewee worked at the center as an employee whose primary responsibility was to oversee a specific project of the center. In this case, some questions were added to inquire more about the specific project and other questions which referred to funding streams and administration were reserved for the director of the center. Throughout the entire project, these four philosophical assumptions served to ground this project firmly in the qualitative tradition. However, within this broad tradition of qualitative research, an even more complex collection of practices exists. That is, beyond these four assumptions, decisions regarding the specific genre of qualitative methodology, the data collection procedures, and the data analysis approach needed to be identified. In order to drill down to this next level of specificity, I looked first to Marshall and Rossman’s (2016) text on designing qualitative studies and then again to Creswell's (2013) discussion of the five approaches to qualitative inquiry.

Selection of a Qualitative Approach

Broadly speaking, the goal of this study was to gather information from a handful of LRCs in an attempt to better understand these institutions with respect to form, function, and relevance. With that goal in mind, the case study approach, particularly as described by Marshall and Rossman (2016) and Creswell (2013), was the most logical tool to use for this dissertation. What Creswell (2013) referred to as an "approach," Marshall and Rossman (2016) called a "genre." Despite the debate over what to call them, these specific qualitative modes of inquiry include things like ethnographies, phenomenologies, and case studies. Each of these modes offers unique sets of tools for examining the world around us.

In their discussion of the case study as a genre of qualitative research, Marshall and Rossman (2016) explained that the strength of the approach lies in its "flexibility to incorporate multiple perspectives, data collection tools, and interpretive strategies" (p. 19). Their reference to multiple perspectives reminded me instantly of Creswell's (2013) discussion of both the ontological as well as the epistemological philosophical assumptions of qualitative research. A second strength of the case study mentioned by Marshall and Rossman (2016) is that the approach favors "intensity and depth, as well as exploring the interaction between case and context" (p. 19). Exploring the interactions between cases and contexts was precisely what I hoped to accomplish with this dissertation by comparing multiple LRCs with respect to form, function, and relevance.

My decision to conduct a multiple case study was further informed by Creswell's' (2013) discussion of case study.

In his discussion of the case study, Creswell (2013) emphasized the unit of analysis as one of the main distinguishing factors that sets the approach apart from others. For example, he argued that the individual case is traditionally defined as an event, a program, or an activity. The other approaches he discusses, including phenomenology and ethnography, differ slightly in their definition of units of analysis with the former focusing on specific shared experiences of individuals and the latter being principally interested in culturally homogenous groups. Since the goal of this dissertation was to better understand the LRC as a specific case within a complex system, no other qualitative approach or genre offered as much potential as the case study approach. Despite some minor differences in terminology, both Creswell (2013) and Marshall and Rossman (2016) emphasized the fact that successful case studies employ a variety of data collection techniques as they seek to analyze complex systems and the cases that comprise them. In the following sections of this chapter, I address the specific data collection techniques as well as the data analysis protocols that were utilized in this study.

Data Collection

Three data collection techniques were utilized in this multiple case study. These included semi-structured interviews (Kvale and Brinkmann, 2009), passive observations by way of on-site visits (Spradley, 1980), and reflective journaling (Watt, 2007). Two of these three data collection techniques, interviews and observations, are included in what Marshall and Rossman (2016) referred to as the primary data collection methods of qualitative research. Reflective journaling was added as a necessary third technique in order to address my own values and biases that I brought to this study. In selecting these data collection techniques, my goal was to identify methods that would address the multiple realities involved in the study. For example, interviews were selected as a way to better understand the multiple perspectives espoused by the individuals associated with these various centers. On-site visits were made in order to get a sense of place and to document these centers' physical and social spaces. Finally, reflective journaling was included as a way to account for my own unique reality and to bring forth my own views as explicit and purposefully selected pieces to the overall puzzle. Prior to implementing these procedures, a proposal was submitted to my local Institutional Review Board (IRB) Office and permission to conduct this study was obtained.

It should be noted that LRCs have been researched using other approaches and techniques. For example, Kronenberg (2016) reported on data gathered from a mixed-methods survey which is occasionally distributed by the International Association of Language Learning and Technology (IALLT) organization to LRC directors and staff. Some have used mixed-methods approaches to gather information directly from foreign language students who have interacted with LRCs (Danaher & Danaher, 1998). A number of articles involving LRCs take an action research approach where researchers offer observations gathered from their own labs and centers (Leamon, 1999; Salcedo, 2010; So, 1974). Fewer studies have utilized interviews to gather insight from LRC directors and those associated with the centers. This scarcity in interview data may be due to the fact that LRCs, which are almost always associated within an educational institution, are geographically spread out. For this reason, data collection methodologies like surveys have been helpful as they have allowed for information to be gathered electronically from multiple sites in a short amount of time. The problem, however, is that surveys and questionnaires sometimes fail to capture the complex and multiple realities that collectively shape each LRC. In the end, the decision was made to employ interviews, on-site visits and observations, and reflective journaling as qualitative tools of inquiry for this study.

Interviews

The interview protocol was designed as a semi-structured interview (Roulston, 2010) and was organized around three central themes, all of which link back to the three research questions of this study. These themes included form, function, and relevance of LRCs. Additionally, a question pertaining to the background of the interviewee and their relationship to the LRC was asked at the very beginning of the interview. After the interview questions had been drafted, they were sent out to the dissertation committee members for additional feedback and revision. Furthermore, feedback on the interview questions was sought from an expert in the field who did not serve on the dissertation committee. The final version of the interview protocol is included as Appendix A in this dissertation. Knowing that the primary data collection source for this study would be the interviews, I took great care to ground my protocol in the recommendations set forth by experts in qualitative methodology.

Of these qualitative experts, Kvale and Brinkmann (2009) and Roulston (2010) offered particularly relevant information regarding the interview as a staple of qualitative research. Kvale and Brinkmann (2009) stressed the importance of approaching the interview as three distinct phases and argued that what happens before the interview (setting the stage) and after the interview (winding down) are just as important as what happens during the official interview itself. Informed by Kvale and Brinkmann (2009), I ordered the interview questions according to their complexity and depth. Consequently, the interview begins with a simple demographic question in order to ease the interviewee into the dialogue. Not until the final three questions does the interview begin to address the complex issues of relevance.

Although some of the interview questions are general in nature, others are quite specific. For example, the fourth question in the category of function asks about the role of the LRC in providing professional development. This question may seem oddly specific but it is informed by Kronenberg's (2016) finding that 59% of LRCs listed professional development as one of the main services they provide. A second reason for including the question on professional development was because of my early hypothesis that professional development, particularly with respect to the use of language learning technologies, played an important role in redefining the traditional language laboratory. The very next question in the protocol refers to the role of the LRC in assisting with computer assisted language learning as well as computer assisted language teaching. Although the question on professional development was constructed as a specific follow up to Kronenberg's (2016) findings, this question on technology-based pedagogies drew more generally on the historical roots of language laboratories. Other questions, like those included in the category of organization were more general and exploratory in nature. Lastly, three questions were drafted which inquired about the perceived relevance of the LRC to the current climate foreign language education. Knowing that most of the participants of this study would be directly employed by these centers, my goal was to write these questions in a positive light without leading the interviewee to any sort of idealistic conclusion about LRCs.

On-site Visits

I was able to personally visit three of the five LRCs discussed in this study. Again, my goal was to provide a rich, detailed account of each of the cases in this study. In order to do so, I wanted to see these spaces with my own eyes so that I could observe how individuals interacted with them. These visits were conducted with Spradley's (1980) description of passive observation in mind. Spradley argued that passive observation is where the observer is "present at the scene of action but does not participate or interact with other people to any great extent" (p. 59). This is a fairly accurate description of what took place during these on-site visits. Indeed, the only interaction that occurred was the dialogue between myself and the various LRC staff members as they showed me around and explained how students, staff, and others interacted with these spaces. For each of these visits I was able to take pictures of the physical space occupied by these centers. For the centers that I was not able to visit in person, pictures were provided by the interviewees so that I could get a sense of each LRC's layout. The third and final data collection tool for this study was reflective journaling.

Reflective Journaling

Reflective journaling served two primary purposes for this dissertation. The first purpose was to serve as a way for me to think through my own positionality with respect to this study. The second purpose was to provide a third form of data collection. By adding this extra layer of data, I hoped that my written thoughts would serve to clarify and deepen the data collected through the interviews and on-site visits. In discussing the value of reflective journaling, Watt (2007) offered the following insights:

> By engaging in ongoing dialogue with themselves through journal writing, researchers may be able to better determine what they know and how they think they came to know it. An introspective record of a researcher's work potentially helps them to take stock of biases, feelings, and thoughts, so they can understand how these may be influencing the research (p. 84).

Watt (2007) went on to describe how reflective journaling has the power to increase the overall credibility of the study because the researchers' written trail of thought is included as an explicit part of the data analysis. Consequently, I maintained an ongoing research journal throughout this project. At various points during the project I included a new journal entry with my informal reflections on how things were coming along. These written reflections helped me to maintain the methodological flexibility discussed by Creswell (2013) and to bracket my own values and biases.

Anticipating the complex and highly unique structures of contemporary LRCs, I felt that the best way to carry out this study would be to employ an equally diverse set of tools with which to collect data. Consequently, interviews, on-site visits, and reflective journaling were selected as data collection tools for this study. Together, these instruments allowed me to get close to each case and to successfully navigate the multiple realities that were found at each site. Having decided on these various data collection tools, I then considered my approach to data analysis.

Data Analysis

Data analysis for this study draws primarily from Saldaña's (2009) descriptions of structural, in vivo, focused, and theoretical coding techniques. Each interview transcript was rigorously coded using each of these four coding techniques. Additionally, each subsequent phase of coding was informed by the previous coding phase. The first phase, structural coding, drew directly for the research questions in this study. In the follow sections, I describe each of these four phases of data analysis as they were applied to the transcribed interview data.

Structural Codes

The first round of coding employed structural codes and helped to provide an overall feel for the data within the framework of the research questions. In describing structural coding, Saldaña (2009) explained that it "applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data to both code and categorize the data corpus. Structural Codes are general foundation work for further detailed coding" (p. 66). As an example of this important distinction, consider the following interview excerpt:

> Something that we're hoping to do in the future is actually to do some summer camps. We're thinking about that for next summer and then that funding would probably, I don't know how that would work. I'd imagine that some of it would be to support the department and then some of it would be to support the center. (Alisha, MC Director, interview transcript, p. 3, July 17, 2017).

Now, from a structural coding perspective, this excerpt would be coded according to its content (function) and time marker (past). A set of nine structural codes representing three kinds of content and three different time markers were applied during this round of qualitative coding. These codes are included in Table 3.2 below.

Table 3.2. Structural Codes

Form: Past	Form: Present	Form: Future
Function: Past	Function: Present	Function: Future
Relevance: Past	Relevance: Present	Relevance: Future

Again, the selection of these nine codes were informed by the core research questions as well as the conceptual framework outlined in Chapter 2 of this dissertation.

The problem of defining the cutoff points between past, present, and future proved to be a difficult task. Although the literature review for this study used the turn of the century as a way to define past and present, these codes were applied with a slightly different reference point. Codes for the present were applied with respect to the actual present or current day. Codes for the present were also applied to moments when interviewees were talking about the recent past (within a year or two) and/or the recent future. With respect to content, a similar flexible approach was applied. Some excerpts, for example, discussed issues of form that seemed to include notions of function and vice versa. Relevance, given the ambiguity of the term, was equally difficult to code for. The following excerpt typifies these challenges:

> And so, I'm not lacking for physical space. I have more square footage than probably anybody else I know in the country and I'm not lacking in any technology funding. So, I can have big screen monitors or I can even have virtual reality classes if I want them and, but the goal is not the technology anymore. That's the, I think going back to one of your earlier questions, the huge, the biggest shift, it's not the, it's not a place for the technology. The learning center of the future is the place where the social, for the social connection. (Daniel, KC Supervisor, interview transcript, p. 1, July 28, 2017)

The excerpt above was coded using both the "Form: Future" and the "Relevance: Future" structural codes. The notions of form, relevance, and function were often found intertwined as can been seen in this excerpt. Despite these difficulties, this first round of coding provided a helpful framework for the subsequent coding phases.

<u>In Vivo Coding</u>

As a follow up to the structural coding round, each transcript was then coded using the in vivo coding approach. A wide variety of in vivo codes were applied to the ten interview transcripts. As the second round of the initial coding sequence, this layer of codes served to further deconstruct the content of each interview. Because in vivo coding is a sort of literal or verbatim coding technique, it is impractical to summarize the codes in any sort of figure or table, the body of codes is simply too large and complex. However, in order to give the reader a sense of the kinds of in vivo codes that emerged during this sample, the following excerpt is offered: “The testing obviously could become part of the campus testing center, whatever that may be on any campus” (Daniel, KC Supervisor, interview transcript, p. 8, July 28, 2017). This excerpt was coded using the in vivo code, “testing could be taken over by the testing center.” The close alignment between the excerpt and the code adheres to Saldaña’s (2009) explanation that in vivo coding lends itself well to studies that seek to “prioritize and honor the participant’s voice” (p. 106). From these in vivo codes, a set of sixteen focused codes were generated and applied in the third round of coding.

Focused Coding

In his discussion of focused coding, Saldaña (2009) explained that “Focused Coding follows Initial Coding, a First Cycle coding method. Focused Coding searches for the most frequent or significant Initial Codes” (p. 155). Saldaña also argued that during this round of coding, focused coding should remain somewhat flexible in the categorization process. He explained that categories “do not always have their constituent elements sharing a common set of features” and that they “do not always have sharp boundaries” (p. 155). Here, the data begins to go through a reconstruction phase where the structural and in vivo codes inform the creation of a broader, more inclusive set of codes. To offer a metaphor for this process, you might think of the first round of coding as flipping over all of the puzzle pieces and then maybe grouping them loosely by color. Consequently, the second round of coding begins to assemble these similar pieces into several groups of cohesive sections. To get a sense of these sections, Table 3.3 displays the focused codes used during this third round of qualitative coding.

Table 3.3. Focused Codes

Supporting: Tech	Supporting: Research	Supporting: Pedagogy	Supporting: Materials
Supporting: Assessment	Supporting: Student learning	Lamenting: Department	Lamenting: Administration
Relinquishing	Comparing	Justifying	Innovating
Networking: Within	Networking: Beyond	Coordinating: Conversation Hours	Coordinating: Language Instruction

As I went through the first two cycles of coding, I began to identify subtle differences in the ways the interviewees talked about support. These differences are evident in Table 3.3 above as seven of the sixteen focused codes deal with this idea of support. It is important to note that for this round of coding, strict rules of inclusion were not utilized and so the codes themselves reflect a certain amount of overlap and ambiguity. For example, the code, “Supporting: Student learning,” is closely related to the code, “Supporting: Materials.” Indeed, the argument could be made that if a center is providing authentic materials to a student that the action is a clear example of supporting student learning. However, the two exist as separate codes to account for the nuances that emerged in excerpts like the following: “I’ll check them into the center, check them out of the center, help with English if they ask for it, which is more often than I thought would happen” (Joyce, CC Student Employee, interview transcript, p. 1, July, 31, 2017).

This kind of support for the student didn't quite fit into the other supporting categories and so was included in the somewhat vague but most appropriate category, "Supporting: Student learning." Another somewhat broad category was the "Supporting: Pedagogy" focus code. This code included all efforts related to professional development whether they referred to workshops, invited lecturers, or external sources of support. And finally, the "Supporting: Research" code refers to descriptions of centers that offered direct research support for faculty in the constituent departments. This research was sometimes offered in the form of digital tools and other times in the form of collaborative research teams.

The focused code, "comparing," also warrants some additional clarification. This particular code was very broad and included moments when interviewees were comparing their center either to a past model, another center at another institution, and/or another center on campus that offered support services. The bulk of these occasions were either comparisons between past and present models or comparisons between existing language resource centers. However, a few occurrences of comparing the language center with other support centers on campus did occur. Nevertheless, the decision was made to combine these three slight variations of comparisons into the single focused code, "Comparing." The notion of lamenting was a defining feature of a small subset of the ten interviews. By the term, "Lamenting," I refer specifically to any indication of difficult or tense relationships between the center, the department, and/or the administration.

The code, "Relinquishing," was fairly common among the ten transcripts and this is likely due to the fact that one of the interview questions asked about the possibility of splitting up existing functions of the center. As interviewees discussed the pros and cons of breaking up these functions and relegating them to other units, their comments seemed to fit best under this larger umbrella of “Relinquishing.” As a follow up, most interviewees then turned to discussing the functions and responsibilities that would be either difficult or impossible to hand over to another department or university unit. These arguments were funneled into the focused code, “Justifying,” as in the justification of the center’s current form and functions. The code, “Innovating,” was another problematic but necessary code that was used during this round of analysis. Particularly, it was challenging to draw the line between functions that received the code, “Innovating,” and other creative functions that did not seem to be pushing the boundaries of traditional LRC activities. To offer a clarifying example, one center was in the process of rolling out a very intriguing program that orchestrated a collaborative program to offer college credit for high school students who wanted to take more high school language courses even after completing their AP exam. Given the uniqueness of this LRC-based program, discussions pertaining to this particular function were coded as “Innovating.”

Finally, some LRCs described efforts in reaching out to other centers and departments on campus and in the community. These efforts were subsequently coded using the “Networking: Within” and “Networking: Beyond” codes where “within” referred to within the university community and “beyond” referred to various attempts to engage the surrounding community. A few centers in this study discussed their roles as coordinators of both conversation labs and lower level language instruction. Thus, conversations related to these functions were coded using the two “Coordinating” focused codes. The patterns that began to emerge from this first three rounds of coding ultimately resulted in the final round of codes.

Theoretical Coding

The final coding round of the four-step process employed theoretical codes. As I reflected on the previous three rounds of coding, I began to notice the somewhat binary nature of some core themes to the data. That is, there were cases where interviewees described their centers in ways that suggested a close alignment of purpose between the center and the department and/or institution overall. Similarly, there seemed to be general trends in the data that suggested a misalignment between these three units. This same binary split was noticeable with respect to innovation and institutional support as well. Regarding innovation, centers either spoke of functions that appeared to be innovative in nature or they described those that seemed to be operating at a level of functional maintenance. Similarly, the issue of support (both departmental and institutional) began to emerge as an interesting wedge that helped to define the differences among the five centers. The final pair of theoretical codes was created in order to better understand the issue of flexibility as pertaining to both form and function of the centers. Again, to give the reader a sense for the data generated by the theoretical codes, Table 3.4 displays the actual theoretical codes used for this last round of coding.

Table 3.4. Theoretical Codes

Flexibility (FLEX +)	Inflexibility (FLEX -)	Institutional Alignment (ALIGN +)	Institutional Misalignment (ALIGN -)
Active Innovation (INNOVATION +)	Functional Maintenance (INNOVATION -)	Institution Supportive (SUPPORT +)	Institution Antagonistic (SUPPORT -)

This last round was the only round where specific rules of inclusion were drafted prior to the application of the codes to the data. The decisions to maintain flexibility for the first three rounds and to employ an explicit application of rules of inclusion for the final round were informed by Saldaña's (2009) as well as Lincoln and Guba's (1985) recommendations for each of these coding procedures. Table 3.5 displays the theoretical codes and their corresponding rules of inclusion.

Table 3.5. Rules of Inclusion for Theoretical Codes

Flexibility (FLEX +)	Past examples of positive change regarding space, technology, organization, function, and other aspects in order to meet the demands of new methodologies and technologies.
Inflexibility (FLEX -)	Past examples of either slow or absent change as methodology and technologies evolved.
Institutional Alignment (ALIGN +)	The needs and demands of the department and/or institution are in sync with the forms and functions of the center.
Institutional Misalignment (ALIGN -)	The needs of the department and/or the institution are not in sync with the forms and functions of the center.
Active Innovation (INNOVATION +)	Present and future signs of innovation regarding space and/or function. These may or may not be "aligned" with the department/institution goals.
Functional Maintenance (INNOVATION -)	Signs that demonstrate the center is operating at a functional maintenance level. That is, taking care of the core mission but not seeking out ways to innovate with form/function.
Institution Supportive (SUPPORT +)	Signs that the department/institution is supportive of the center's efforts (form/function) regardless of whether or not these are well aligned.
Institution Antagonistic (SUPPORT -)	Evidence that the department/institution is antagonistic towards the center, even if the center's form/functions are well aligned and/or innovative.

It is important to note that for issues pertaining to flexibility and innovation, it was difficult to identify examples of inflexibility and non-innovation because, as one might imagine, interviewees were not likely to speak about their centers in these ways. Consequently, this required a careful reading of both what was present in the text, as well as some inference on my part about what was not. Although the rules of inclusion listed in Table 3.5 above helped to minimize my own subjectivities, a completely objective analysis was not possible for this study. On this matter, there are those who have not only accepted the sometimes subjective nature of research but have actually lobbied for its important role in understanding complex phenomena (Palmer, 2007; Pike, 1967; Todeva & Cenoz, 2009). Saldaña (2009) referred to these final stages of coding as a way to "strategically reassemble data that were 'split' or 'fractured' during the Initial Coding process" (p. 159). Although this four-step coding process was well suited for the interview data, a secondary form of analysis was utilized in order to gain a more holistic understanding of each of the cases in this study.

Narrative Analysis

Given the complex and somewhat eclectic nature of the on-site and reflective journaling data, narrative analysis was identified as a particularly well suited analytical tool. In describing the narrative approach to data analysis, Roulston (2010) explained that in qualitative research, narratives are "life stories involving documents, interviews and observations, or sequences of interviews and conversations" (p. 163). In narrative analysis, these data come together to form a scaffolding as the researcher tells the story of lived experiences, both their own and those of the study's participants. Lyle (2009) spoke of this process, writing that "narrative cannot be regarded as separate from real life; rather they must be understood as the revisiting of life experiences that are considered influential by the author" (p. 295). To tell each LRC's story, I drew from my field notes, the on-site visits, and photographs of each center in order to contextualize the interviews that I conducted. Despite the common understanding that narrative analysis draws on lived experiences in attempt to describe truth through narrative, there seems to be quite a lot of variability in how narrative researchers go about this process. In fact, Jeppesen (2016) began his article on the topic by saying that “there is a call to narrative investigators to be more explicit about their ways of working methodologically” (p. 1636). Therefore, when it came time to narrate the lived experiences pertaining to each LRC included in this study, I employed a carefully designed four-step process that allowed me to move between the three additional data sources as I attempted to breathe life into each narrative.

This four-step process began with a review of the photographs of the physical spaces that were either taken by myself or provided by interviewees. After reviewing the photographic data available for a site, I would then allow my mind to wander back to the on-site visits and verbal descriptions of the physical layouts of each LRC. For the third step in this analysis, I would revisit my journal entries and notes pertaining to each site as a final preparatory step before beginning the task of articulating each LRC’s story. The final and fourth step to this narrative analysis consisted of a periodic revisiting of the photographs, personal recollections, and journal entries as each story unfolded. It is important to note that data generated from the interviews also contributed to these narratives. Results from the coded transcripts help to confirm the observations and assumptions embedded within each of these narratives. In this way, there was a symbiotic relationship formed between the data sources as the interview data both strengthened and was strengthened by data generated through the photographs, on-site visits, and research journal. A brief overview of each of the centers is provided in Table 3.6 below. Note that the center titles are pseudonyms for the actual LRCs included in this study.

Table 3.6. Pseudonym Center Titles and Other Participant Descriptors

Pseudonym Center Title	Reason for inclusion in study	Center representatives chosen for interview
Knowles Center (KC)	Chosen because of geographic proximity to my location and existing professional contacts at the center.	Tiffany, KC Director: In-person interview at center Daniel, KC Supervisor: Phone interview
Swift Center (SC)	Chosen because of geographic proximity to my location. I had no previously existing professional contacts at the center.	Erika, SC Director: In-person interview at center Tyler, SC Employee: In-person interview at center
Mayer Center (MC)	Chosen because of geographic proximity to my location and existing professional contacts at the center.	Alisha, MC Director: In-person interview at center Nathan, MC Faculty Member: Phone interview
Dylan Center (DC)	Chosen despite the geographic distance from my location because of the existing professional contacts at the center.	Bill, DC Director: Phone interview Dee, DC Associate Director: In-person interview at academic conference
Carey Center (CC)	Chosen despite the geographic distance from my location because of the existing professional contacts at the center.	Randy, CC Coordinator: Phone interview Joyce, CC Student Employee: Phone interview

Participants

As Table 3.6 demonstrates, the five language centers included in this study were selected based on a combination of practical as well as theoretical criteria. From a practical perspective, the LRCs, with two exceptions, were selected because of their geographical proximity to my location. The centers included in this study came from three different states in the United States. Only one of the four institutions mentioned in this dissertation was located too far for me to visit in person. This institution housed two of the five LRCs in this dissertation. At first, I was hesitant to include these centers knowing that I would not be able to visit them in person. However, despite not being able to see these locations with my own eyes, I was able to get a virtual sense of the spaces through photographs and descriptions provided by the interviewees at these locations. Furthermore, I felt that the information that I would gain from these centers would still be valuable information as I sought answers to my research questions.

Beyond the practical reasons for participant selection, I attempted to identify a set of LRCs that were associated with similar kinds of institutions. For example, although I had a chance to include a federally funded, nationally recognized center, I chose not to visit that center with the goal of maintaining a more cohesive group of LRCs for this analysis. By restricting my pool of participants to a more homogenous group of institutions, I hoped to eliminate the chance of including an extreme outlier in my final analysis. The LRCs in this study were associated with large research universities in the western United States. All four institutions regularly enroll more than 20,000 students with three of the four regularly enrolling more than 30,000 students. An important distinction of these centers is that none of them were supported by Title VI funds, which have been appropriated through the Higher Education Act to support teaching and learning foreign languages at the national level (NFLRC, 2017). By restricting my analysis to non-Title VI centers, I hoped to better understand the funding models for centers whose operations depended on alternative, often internal sources of sustainability. Finally, it is important to note that I was introduced to four of the five centers included in this study through personal and professional contacts. In reference to participant recruitment through personal networks, Roulston (2010) provides the following insight:

> For researchers using personal connections to informants as a means to recruit participants, relative intimacy and rapport with participants may enhance the

> generation of data in interview settings in ways not possible for ‘outsider’ researchers (p. 98).

However, Roulston (2010) also offers words of caution regarding this approach explaining that, “When a researcher knows a particular research participant well, it may be difficult to discuss research topics and ask questions – since both interviewer and interviewee rely on shared knowledge and understandings” (p. 99). With these guidelines in mind, the centers as well as the individuals associated with them were selected. In summary, only two of the interviewees belonged to my own personal and professional contact circle. Six were actually recommended to me by other professional contacts and the remaining two interviewees were not connected to me either by primary or secondary contacts.

In addition to the details listed here regarding the centers and the institutions of higher education that housed them, it is also necessary to provide a brief overview of the ten individuals that I was able to interview as part of this study. My goal was to interview at least two individuals from each of the five LRCs. I achieved this goal by interviewing the directors of these centers in addition to one other representative at each location. In some cases, this secondary interview was with a staff member employed by the LRC and in others it was a faculty member who was familiar with the institution and its operations. Although I contemplated the idea of seeking out additional interviews at each of the centers, I felt that these ten interviews, along with the on-site visits, photographs, and journaling would provide sufficient data for me to tell the stories of each of these centers as I sought a deeper understanding of the form, function, and relevance of the modern LRC.

Validity, Dependability, and Trustworthiness

Concerning issues in validity and reliability in qualitative research, Merriam (1995) offered a particularly helpful overview. In her discussion of internal validity, that is, the congruence between a study's findings and an external reality, Merriam (1995) made the argument that reality, or as Creswell (2013) might have referred to it, ontology, is at the heart of the matter. If, as many qualitative researchers believe, reality is indeed relative and constructed, then internal validity can only be sought through an approximation of the multiple truths contained within a particular phenomenon or set of phenomena. This issue of internal validity, Merriam (1995) pointed out, is a natural strength of qualitative studies given the methodology's tendency to apply multiple layers of robust data collection and analysis. She then points to the merits of concepts like triangulation, admitting bias, and seeking confirmation from one's professional colleagues and peers as ways to strengthen internal validity for qualitative studies. In seeking to increase the validity of this dissertation, I have made efforts to follow these recommendations outlined by Merriam.

On the other hand, Merriam (1995) also admitted the natural limitations that qualitative researchers face with regards to external validity, that is, the generalizability of a study's conclusions. As ways to account for this perceived weakness, Merriam (1995) pointed to strategies like thick description, multi-site designs, and modal comparison which can be utilized to ameliorate the problems with external validity. These three recommendations have been integrated into the research design of the present study. First, the multiple approaches to data collection and the multi-layered nature of the data analysis were attempts to provide the thick and rich description that has now become a staple of qualitative research studies. Second, the decision to include five distinct LRCs conforms nicely to Merriam's (1995) call for multi-site designs.

Additionally, Merriam (1995) offered recommendations regarding reliability in qualitative research. At the heart of her argument is that the entire notion of reliability, inasmuch as it pertains to the replicability of a study's results, is problematic in matters of qualitative inquiry. Arguing this point, Merriam (1995) explained that "measurements and observations can be repeatedly wrong, especially where human beings are involved" (p. 55). She then cited Scriven (1972) as she explained the following:

> A lot of people experiencing the same thing does not necessarily mean that their accounts are more reliable than that of a single individual. Five hundred people reporting that they had seen a magician cut a person in half, for example, would not be as reliable as a report as that of the lone stagehand who had witnessed the event from behind the curtain. (p. 56)

Given this natural disconnect between the notion of reliability and qualitative research, Lincoln and Guba (1985) called for new, more appropriate measures of quality to be referenced in lieu of reliability: dependability and consistency. In this sense, reliability is viewed in the internal rather than external sense. Qualitative studies that adhere to the guidelines set forth by Lincoln and Guba (1985) with respect to dependability and consistency are able to demonstrate clear and credible connections between the gathered data and the subsequent conclusions that are drawn.

With respect to narrative analysis, guidelines pertaining to validity, dependability, and trustworthiness have been somewhat scarce in the past (Loh, 2013). In an attempt to remedy this dearth of information, Loh (2013) pointed to the concepts of verisimilitude and utility as ways to establish trustworthiness and of measuring quality in narrative analysis. Loh argues that verisimilitude, that is, the ability to approximate truth or reality, “is important because it allows others to have a vicarious experience of being in the similar situation and thereby being able to understand the decisions made and the emotions felt by the participants in the study” (2013, p. 10). Loh’s (2013) second criteria for trustworthiness in narrative research is utility. With respect to utility, Loh made the simple argument that for narrative research study to be perceived as a credible approach to inquiry, it must seek to be useful not only to the researcher and the study’s participants, but to the larger professional community as a whole. Together, the notions of validity, dependability, and trustworthiness informed the design of the present study of language resource centers. As I have outlined in this chapter, decisions like the triangulation of data sources, the inclusion of multiple sites, and the variety of data analysis techniques were all taken in order to account for these issues discussed by qualitative research experts like Lincoln and Guba (1985) and Merriam (1995).

Conclusion

In this chapter, I outlined the methodological decisions made for the present study. First, I began by contextualizing these decisions within the framework of Creswell’s (2013) four philosophical assumptions of qualitative methodology: ontological, epistemological, axiological, and methodological. After summarizing Creswell’s (2013) assumptions, I then explained how each of these issues pertains to the area of LRC research. These connections then opened up the space to discuss my decision to employ a multiple case studies approach to this dissertation. Again, I turned to the work of Creswell (2013) but this time drew also from the writing of Marshall and Rossman (2016) and their discussion of how case studies are particularly well-suited for investigating complex social phenomena, navigating the intricacies of multiple realities, and inquiry approaches that require high levels of flexibility and adaptability.

In my discussion of data collection, I outlined how interviews, on-site visits, and reflective journaling were utilized to gather data on current models of LRCs. These three approaches allowed me to triangulate the data points. Merriam (1995) stressed the importance of such data triangulation when she wrote the following:

> If the researcher hears about the phenomenon in interviews, sees it taking place in observations, and reads about it in pertinent documents, he or she can be confident that the 'reality' of the situation, as perceived by those in it, is being conveyed as 'truthfully' as possible. (p. 54)

After outlining my approach to data collection, I then explained my methodological decisions for data analysis. For data analysis, I explained how each of the data points would be analyzed using slightly different data analysis techniques. A four-step qualitative coding, as informed by Saldaña (2009), was outlined as a way to analyze the interview data. For data generated by the in-person observations and reflective journaling, I proposed a narrative analysis approach in order to synthesize the acquired information. I concluded this chapter by describing the nature of the five LRCs included in this study and the 10 interviewees that participated in either in-person or over the phone interviews. Lastly, I discussed issues pertaining to validity, dependability, and trustworthiness as they pertained specifically to this study of language resource centers.

CHAPTER FOUR: FINDINGS

This chapter summarizes the data generated from the interviews, on-site visits, and reflective journal entries. This summary is first provided in the form of descriptive narrative profiles for each of the five language resource centers included in this study. Each narrative profile consists of an introduction to the center that explains the reasoning for its corresponding pseudonym title and provides a general context for the specific findings pertaining to the center. These specific findings follow the narrative profile introductions and are organized categorically in accordance with the three main research questions for the study. A short series of relevant figures provide a bit of quantitative background and serve to link the narrative introductions to the main findings of this dissertation.

Narrative Profile Introductions

The following narrative profiles draw from both Roulston's (2010) and Lyle's (2009) discussions of narratives as powerful analytic tools.

The Knowles Center

One of the first aspects that impressed me about the Knowles Center was its physical location. The multi-story building that houses the center is a major hub for the university's College of Humanities and features a number of flexible and active learning spaces. Furthermore, the building is centrally located within the heart of the main campus. The Knowles Center itself is located on the ground floor of a modern edifice and is bathed in copious amounts of natural light that flood in through floor-to-ceiling windows. After a short walk down a hall I arrived at the main office for the center, which consisted of a front desk and small waiting area. As the desk was unattended, I proceeded down another little hall lined with offices until I found the director's office where my scheduled interview was to take place.

Following the interview, the director, Tiffany, took me on a tour of the various facilities of the center. We started on the main floor where I had a peek into a large server room that Tiffany said would likely continue to decrease in use given the future direction of technology. As we walked through various lounge areas and computer labs, Tiffany continued to speak highly and optimistically about the various projects that were underway. She beamed as she pointed out a collection of recently constructed small group classrooms which had been set up with the latest technologies for videoconferencing. She explained that these small conference rooms were constructed based on feedback from both students and faculty who liked to use the spaces for small group conversations and seminar-style classes.

After my tour of the main floor, I was then led downstairs where I was able to peek into a busy testing center that was being used by foreign language students. As my visit to the Knowles Center took place in July, a typically quiet time on college campuses, I was surprised to see that the testing center was full of students. In a later interview with the Center's supervisor, Daniel, the topic of the testing center was discussed. Daniel explained that the testing center is "extremely well used. That's the most used portion of our area." This hustle and bustle wasn't the case for all parts of the center. For example, the computer labs that I walked through on the main level were almost completely void of students. In fact, the director spoke of this under-utilization of space during our interview saying:

> Every year we have to look at what we provide and what students are using and what we think they need. And I think, since I've been here, we've asked ourselves the question, are we going to need a computer lab in five years? (Tiffany, KC Director, interview transcript, p. 8, June 16, 2017)

This reduction of the traditional computer lab space was also mentioned by Daniel during our phone interview. Daniel explained, "We've already removed a third of our computers and made small classrooms" (Daniel, KC Supervisor, interview transcript, p. 7, July 28, 2017). Admittedly, this reduction in computer stations is not necessarily the boundary pushing, edgy trend that one might think. In fact, discussion of reducing the role of computers was discussed by four of the five centers included in this study. The only center not to discuss this issue had already disconnected itself from the computer lab altogether.

As the tour continued on, I was led to a two-room suite equipped with a full-service kitchen. The suite contained a welcome desk in the front room and cushy moveable chairs in the back room. Stacks of water and snacks were on the counters in the kitchen and the shelves were lined with foreign language books and various other cultural artifacts. With respect to computer-assisted language learning, the Knowles Center offerered the latest language learning software programs. However, the center also builds in-house custom software to meet the needs of the language departments. The director elaborated on this point saying, the Knowles Center, "has been sort of a leader in that area in terms of producing custom software. So, in my career I have produced teaching and learning software for Russian, for Spanish, for Chinese, Japanese, Italian, I'm probably forgetting, German, French, and I may be forgetting some" (Tiffany, KC

Director, interview transcript, p. 7, June 16, 2017). This kind of innovation was possible as the center employs a wide breadth of experts ranging from programmers to applied linguists and houses them within the same unit. We finished our tour of the kitchen/lounge area and then ascended the stairs once again to say our goodbyes.

Many of the impressions I had during my visit to the Knowles Center were confirmed in the subsequent data analysis of the interview transcripts. Perhaps the quote that seems to best embody this impressive center was expressed by Daniel, the center supervisor. After asking Daniel what he would do with the center if he had unlimited funding and absolute decision-making freedom, he responded simply, “Good question. I’ve always had almost unlimited funding and almost complete freedom” (Daniel, KC Supervisor, interview transcript, p. 9, July 28, 2017). He then added:

> Not only has the administration from the top and the college administration intermediately been extremely supportive, we have been blessed financially so that if we want a particular type of technology or change a room, I mean we usually get what we want so that question is not just so hypothetical because we’ve actually done it (Daniel, KC Supervisor, interview transcript, p. 9, July 28, 2017)

And yet, even the Knowles Center seemed to be uneasy about issues pertaining to relevance in the ever-changing climate of foreign language education. This anxiety is embedded in a comment expressed by Daniel as he explained the following:

> So, the biggest, obviously the huge, huge shift is that now the technology is now, it fits in your pocket and has multiple, more, many more, manifold more functions than that one-hundred and fifty-thousand-dollar language lab and the focus of language interaction is now moved from staged or rehearsed or scripted to actually using those devices to communicate with real people. So that is a huge shift, and in essence, a loss for the language center because we’re no longer an active part of that process. We used to facilitate that process. Now we’re in the way of that process. (Daniel, KC Supervisor, interview transcript, p. 6, July 28, 2017)

This "being in the way" is an alarming thought for many language centers today. It is precisely this concept that motivated me to pursue the idea of language center relevance in this dissertation.

In the end, it was clear to me that among the five centers included in this study, the Knowles Center seemed to be the best equipped, most supported, and most innovative of the group. Yet, despite these excellent conditions, Tiffany and Daniel both expressed concerns regarding future relevance. The second center I visited, although not quite at the level of the Knowles Center, had a number of laudable characteristics.

The Mayer Center

My second visit was to a center that I decided to name the Mayer Center. My visit to the Mayer Center was a relaxing one where I was able to experience a fully functioning, newly renovated space that was physically located within the same building as the languages department. The tour began in an open, socially inviting room that had just a single line of computer stations relegated to one wall. The rest of the room was equipped with modern furniture with a tasteful mix of moveable chairs and tables. This emphasis on social interaction was mentioned a number of times both by the center's director, Alisha, as well as by the language department faculty member I interviewed over the phone, Nathan. In speaking about this topic, Nathan said, "I just think that people still like that human interaction when so many classes are going online, I think just doing it with the languages, it's been like something positive" (Nathan, MC faculty member, interview transcript, p. 5, July 31, 2017) These sentiments were also reflected in my conversation with Alisha. She explained:

> The main focus is that human interaction and that's something that what with CALL, MALL, I like, it's really hard to replicate that and have an authentic

> experience, you know? And so, we use technology. Like, we'll do like a collage or we'll use authentic resources. Like, we'll pull up a train station schedule or something like that but really, like the most valuable resource, as corny as it sounds, is the people that we have working here. And I think that's how we stay relevant. (Alisha, MC Director, interview transcript, p. 7, July 17, 2017).

Again, just as I had experienced at the Knowles Center, this sense of relevance appeared to be tied to the balance between human to human and human to machine interaction.

To the back of this first room in the Mayer Center there was a small office that served as a materials library where a collection of resources and devices could be checked out and used. Materials libraries are typically leftover traditions that have roots going back to the days of the language laboratory. And yet, it was a function that was observed in three of the five centers included in this study. Here at the Mayer Center, the materials library served to "provide a space for students and instructors to check out a variety of materials whether that be board games, films, iPads, instructional books, things like that" (Alisha, MC Director, interview transcript, p. 4, July 17, 2017). The breadth and depth of these material resources tend to vary significantly between language centers with some centers offering no material resources at all to others who maintain enormous repositories consisting of both print and digital materials. As we continued on through the office we found ourselves in another socially inviting space that seemed to be arranged more for the purpose of videoconferencing and/or small seminar style group activities. Here my thoughts drifted back to my earlier visit to the Knowles Center and their small videoconferencing rooms. By comparison, this room at the Mayer Center was less private and seemed to cater to more of a multi-purpose arrangement. In fact, when I asked Nathan what kinds of changes he might like to see with the Mayer Center, he spoke specifically about the limitations of space and the downsides of these sort of obligatory multi-purpose arrangements. Nathan said:

> More space wouldn't be bad, like if we could have, sometimes I've been in there doing like a meeting with the honor society group and then there's, you know, it's a big room but it's not all divided so it's kind of hard to like sometimes have two language labs. So, more space would be great. (Nathan, MC faculty member, interview transcript, p. 6, July 31, 2017)

This desire for more space was in direct contrast to the almost overly spacious Knowles Center. As the tour continued, I got an even better sense of the physical layout of the Mayer Center's facilities.

Exiting through the back of the small conference room, Alisha and I found ourselves standing once again in one of the main halls of the languages department. A few tables and chairs were arranged around an entryway area and Alisha indicated to me that these were also spaces that conversation groups could use for their conversation hours. Given that these extra conversation spaces were located in the main hallway, I asked if there were any concerns from the conversation groups regarding the potential noisy and distracting location. The director's response was insightful as she explained that the atmosphere allowed for language students to converse in settings where motion and commotion were part of the authentic communicative experience.

The entire center was made up of a small collection of socially inviting spaces and was located on the ground floor of a building that did not seem to have any particularly unique or distinguishing characteristics. Furthermore, apart from the few tables arranged in the foyers of the main hall, the rest of the center's rooms could not boast of any exterior windows and so only artificial lighting was the default source. Yet, my sense from both the director, Alisha, and the faculty member, Nathan, was that they were very proud of their center and that the relationship between the center and its respective constituents was a happy one.

After the tour, my interview with Alisha took place in her office which was located back at the entryway to the first multi-purpose learning space. After the interview, I recall being quite impressed overall with the small but effective center. Although lacking the bells and whistles of other centers in this study, it was very clear that the center had found a niche and was humming right along under the direction of a passionate and dedicated director. The next and last of the on-site visits was of a significantly different nature.

The Swift Center

The Swift center is small, young, and ambitious. With respect to size and resources, the Swift Center director said, “We’re operating out of a shoebox” (Erika, SC Director, interview transcript, p. 4, June, 16, 2017). Additionally, I got the sense that it maintains a sort of uneasy and awkward relationship between the languages department and, to a certain degree, the administration. These sentiments were expressed during my interview with the director, Erika, as she explained, “It’s not a happy relationship between the center and the department and so, so we don’t do any of that stuff anymore” (Erika, SC Director, interview transcript, p. 2, June, 16, 2017). This sort of volatile relationship existed between the center, the languages department, and the administration.

After about a ten-minute walk from the parking lot, I entered the building that housed the Swift Center on what I thought was the ground floor. Later, I realized that I was actually on the second floor and, because of the two-tiered layout of the building, what I thought was the basement was actually the first floor. I wandered around a bit on the top floor of the building trying to find my way to the Swift Center. I found no information on any of the directory signs that pointed me towards my goal. Eventually, I did make my way down to the first floor and wound up in the main office space for the languages department. One office door was slightly ajar and I could make out that someone was inside as the light filtered out through the gap. I gathered that this was some sort of assistant to the department but whether or not the person was a graduate student or a full-time staff member, I could not tell. In any case, I mentioned the name of the Swift Center director and asked where I might find her office. The assistant's reply was unexpected as she indicated to me that she wasn't sure who that person was or where her office might be. I thanked the woman and continued my journey through the mazelike halls on my quest to locate the center. After a bit more office spelunking, I came to a door that opened up towards a small reception area. Upon my arrival, the front desk was unattended but soon thereafter, a girl came rolling up on a scooter and parked her vehicle behind the desk. I asked again about my contact and was happy to find out that I was indeed in the right place.

I conducted both of the Swift Center interviews that morning on-site. The first took place not with the Swift Center director, but with an employee of the center, Tyler, who was in charge of rolling out an ambitious, and, on all accounts, innovative program. The program aimed to connect high school language learners with various universities with the end goal of incentivizing their continued study of language and culture even after the completion of the high school AP exam. Tyler, who leads this innovative initiative, described his role in the following way:

> I have groups of teams and really, that's most of my job is facilitating productive teams. So, I don't go in with the answer even though I may have the answer in my

> head. I go in to make sure that everyone's backgrounds and expertise are brought to the table so that we can arrive at a new place because we are creating something that doesn't exist like we are dreaming this up man. (Tyler, SC Employee, interview transcript, p. 3, June 16, 2017)

As the interview continued on, Tyler shared with me a little about the lack of cohesion between the center's various innovative projects. When I asked about the overall organization of the center, his response was this:

> We have all these different projects which feed into a lot of different, you know, our big goal. But lots of different, they're not all interconnected. Like, I have no interaction, other than I know some of the teachers, but I don't have direct interaction or collaboration with the military language courses, the immersion courses, but those are, you know, a really critical part of our center. (Tyler, SC Employee, interview transcript, p. 5, June 16, 2017)

After my interview with Tyler, I made my way back down the hall to meet with the Swift Center's director, Erika.

During my conversation with Erika, I learned of other equally innovative and often federally funded initiatives being carried out by the center. As we chatted before the interview, I expressed to her my surprise at the fact that the person in the languages department didn't seem to know anything about the center at all. Her reaction, or rather lack thereof, forecasted the nature of our subsequent conversation. As I later reflected on my visit to the Swift center and the two interviews that took place there, I found it ironic how a center surrounded by so much negativity could be pushing the boundaries of innovative programs. This inter-institutional tension is represented well in Erika's following comments:

> It's frustrating because there will be instances where, you know, someone will approach us and basically, what we've been told is the department always has the right of first refusal. So, you go to them and you say well, you know, we've been approached by Health Sciences about dah dah dah dah dah, and the department chair will say, 'Anything with language is ours and yes, we will take this up.' And

> then she'll have a meeting and then they'll say, 'And nobody is interested' right and so then it will just die on the vine and that's happened. (Erika, SC Director, interview transcript, p. 7, June, 16, 2017)

These sentiments emerged again and again throughout my conversation with the director as she used words like "frustrating" and "awkward" to describe the center's interactions with the languages department and upper administration.

At the end of the interview, the director graciously offered me a tour of the center: all of which took about five whole minutes. The tour included the reception area which I had already found and a peak into a nearby classroom equipped with a group of centrally placed tables which were surrounded by typical looking office chairs. The only other room that belonged to the center was being occupied by a summer language class being offered to military personnel with the support of federal funds. Again, I was struck by the juxtaposition of these really impressive and innovative endeavors that were being implemented by a "shoebox" sized institution. My descriptions for the last two centers takes a noticeably different path as my interactions with them were quite unique from what I experienced with these first three institutions.

Due to limited resources, I was unable to make on-site visits to the final two language resource centers. Interestingly enough, these last two centers are actually housed by the same university but they are located within two separate colleges. The Dylan Center serves multiple language departments and is housed within the College of Arts and Sciences. The Carey Center is housed within a completely separate unit and is designed to meet the needs of the English language learners on campus. As I was unable to visit these two centers in person, I did my best to get a thorough sense of their respective forms and functions during the phone interviews I conducted with the representatives from each center. Furthermore, the directors were gracious enough to provide me with pictures of the various spaces their centers occupy so that I could get an even better idea for their physical layouts. These photographs are not included in this dissertation so as to protect the anonymity of these institutions.

<u>The Dylan Center</u>

The Dylan Center is a place that has undergone significant shifts in focus over the last few years. Bill, the director, explained that the center grew out of a traditional language laboratory that was "in pretty bad shape with a director who didn't know much" (Bill, DC Director, interview transcript, p. 1, August 1, 2017). Later, a new director was hired and the center was eventually modernized and re-centered around three core missions. In our interview, Bill discussed these core missions in this way: "We have a two-prong mission there, or three prong. We provide services and support, we train people in new technologies, and then we also have the intellectual portion of it" (Bill, DC Director, interview transcript, p. 2, August 1, 2017). This last prong, the intellectual portion, consisted of bringing well known scholars and practitioners to campus to share their expertise with the campus community. The intellectual mission seemed to set the Dylan Center apart from the other four centers included in this study. In further elaboration of this, Bill explained the following:

> The pedagogical interest has been woven into a reconstituted [Dylan Center] which includes the lab and also, you know, an academic piece. So, we have a budget. We invite people in to talk about language teaching, various things, you know we're going to have a lecture shortly by someone who works in cognitive grammar. We're going to invite Claire Kramsch. We had Steve Krashen last year. We had the provost from the Defense Language Institute come give a talk on task-based learning so we're constantly doing talks that are of interest to the language faculty. So, it's part of professional development and then we also give workshops. (Bill, DC Director, interview transcript, p. 2, August 1, 2017)

As my interview with Bill continued, I began to get a sense for how integral this intellectual piece was to the overall lifeblood of the center.

At one point, Bill hinted at the tension that sometimes exists between upper administration and language center operations. Here again the centrality of this intellectual component was mentioned as Bill said, "So it just depends on your institution. Whether, you know, you're dealing with people contemplating the intellectual mission or whether they're just counting beans" (Bill, DC Director, interview transcript, p. 7, August 1, 2017) This topic of justifying the center's existence also showed up at a few points during our conversation. As we discussed the issue of language centers being dismantled, Bill said the following:

> Some people would say, 'so what? Who cares?' You know, 'we're planning on teaching just Spanish and that's it.' In which case, you're not at [university]. There are institutions where the finances just override everything and you're almost not dealing with a dean of the faculty you're dealing with a bean counter dean. You know, and in which case, you know. That's the way it is. You know, I would say to someone teaching in those circumstances, try to get out and try to get to another institution. (Bill, DC Director, interview transcript, p. 7, August 1, 2017)

Another account of Bill having to justify the Dylan Center was evident in an interaction he described between himself and a former dean. He explained:

> The question that the dean at that time, who was someone, who was horrid, and really not favorable to languages, she said, 'what do you think of the cloud?' Which in her terms is asking the same question you're asking. So, she was saying, by asking that question, 'what do you think of the cloud?' And I felt like laughing in her face because I said, 'there are many clouds. We're using the clouds for everything. It's part of the infrastructure.' There's really not what do you think about it, it's how do you use it? (Bill, DC Director, interview transcript, p. 8, August 1, 2017)

These accounts led me to reflect on broader discussions about language resource centers losing more and more ground as they are pressured to convert their physical entities into hybrid and sometimes exclusively virtual institutions.

As my interview with Bill came to an end, the director's vision for the future of the center was laid out in a more optimistic and encouraging light. Indeed, Bill's response to my question about what he would do if given unlimited funds and absolute decision-making freedom, was quite unique compared to the other nine interviewees' answers. Bill's comments focused on relationship building between the center and the language faculty. He said:

> I would like to see the language lab not as an add-on but, you know, as a real central part of the training. I guess the issue is that the language center would be the go-to place for professional development and professional development would be valued. That's what I'd go for. So, maybe it isn't a single purchase that I would go for but rather a change in evaluation and how we're viewed by the various departments and that's what I'd move for because one of the missions we have is to revitalize the faculty. (Bill, DC Director, interview transcript, p. 9, August 1, 2017)

My initial sense of the Dylan Center as described by Bill was expanded through a second interview carried out with, Dee, the associate director.

During my interview with Dee, the center's core missions were also discussed. Dee explained:

> I think it's major role is to try to support language teaching, learning, testing, and research. So, a lot of things people, it's kind of enhance foreign language teaching, learning research, and to provide opportunity for professional development and encouraging people to use technology and those kinds of things. (Dee, DC Associate Director, interview transcript, p. 2, June 23, 2017)

Whereas the Swift Center might be known for its outreach programs, the Mayer Center for its orchestration of conversation labs, and the Knowles Center for its abundant resources, the Dylan Center started to take shape as a sort of "jack-of-all-trades" that prided itself for its particular efforts in professional development. Some of the same difficulties that I had heard about at other centers were again echoed by Dee as we talked about faculty participation in the various workshops and professional development opportunities. When I asked about faculty participation in these activities Dee said, "It's all optional. It's hard to get people to come" (Dee, DC Associate Director, interview transcript, p. 2, June 23, 2017)

Later in our conversation we began to discuss the issue of computers and the trend to convert traditional lab space into more socially inviting lounge areas. Dee's comments on these issues were insightful and frank. In discussing the various computer labs operated by the center, Dee explained the following:

> I think, if we really want to go to like a learning space kind of thing, we definitely can take one out. The problem would be if we take one computer lab out, then students come here for what? It's for study, like in moveable chairs? It's a good idea if you have space but if the computer lab is being taken out for that purpose, what's the point? This student community center, the student union center, the libraries, and each dorm has a large area for that too. Four or five places can do the same thing. (Dee, DC Associate Director, interview transcript, p. 4, June 23, 2017)

Dee went on to explain that these converted spaces might be good options as long as students had access to technology through their personal devices. Toward the end of our conversation, Dee spoke of the uniqueness of the Dylan Center and its ability to offer support and pedagogy that is specific to the needs of language learners and teachers. Dee pointed to discipline specific knowledge of multiple region video formats, subtitles, and other language related software programs as subjects that could not be easily taken over by neighboring units or departments.

The Carey Center.

The Carey Center is the last of the five centers included in this study. Of the five, it is the only center that specializes exclusively in the area of English language acquisition. One particular interview excerpt seemed to reflect my overall impression of the center. Randy, the center coordinator, said that "there are a number of people that have said that the center that I run is nicer than the university's chancellor's office. Having been in both of these rooms many times, I would actually have to agree" (Randy, CC Coordinator, interview transcript, p. 1, June 29, 2017). From my interactions with the Carey Center, I got the sense that although its form was at the cutting edge of center design, on the topic of function, the center appeared to be just behind the curve. This was evident in my interview with both Randy as well as with Joyce, a student employee at the center. For example, when asked about the main functions of the center, Randy spoke of providing language students access to authentic materials, grammar textbooks and providing space for students to come and work on their English language homework. Later in the interview, Randy talked about how the center provides headphones for students to use a special pronunciation software in order to practice speaking. Describing this function, Randy said:

> The pronunciation room, just like my office here, has the sort of double paned sliding glass doors that you enter into so when you go in there and you are looking at the wall saying, 'boy, boy, boy, boy,' it's not as sort of embarrassing or disrupting. (Randy, CC Coordinator, interview transcript, p. 2, June 29, 2017)

As I reflected on this particular part of the interview, I couldn't help but think about the isolated carrels of the previous language laboratories and the audiolingual approach to language learning. Furthermore, I found it interesting that, whereas the Swift center seemed to be pushing the boundaries with innovative projects from their "shoebox" sized facility, the Carey Center was more like a walk-in shoe closet that seemed content to cover just the basic functions. Again, Randy's comments during our interview help to provide a sense of just how well equipped the Carey Center is. Randy described it this way:

> It's literally the best-looking space on campus. They're currently building a new graduate student center which is next to the undergraduate student center and that will probably blow us out of the water and be amazingly gorgeous and stuff but for now, we're the best option in town. So, students come here and they know it's, it doesn't stop here, it's not in some basement it's not, you know, some place. It's not in some out buildings like we were before that had poor ventilation and you know, flies coming in from the farms and stuff like that. It's really nice. It helps that it's really, really nice here. So, if they can abide by a couple of rules like you can't bring your coffee in, you know, you can't do this, you can't do that, then they can spend, we have people that spend, so the requirement is eighteen hours per term and then at the end of the term I always give out certificates for the folks who have spent the most time here. This last term, this one guy, for the third term in a row, was the number one time-spender here at two hundred plus hours. So, people are just here all day, it's just a really nice spot. (Randy, CC Coordinator, interview transcript, p. 8, June 29, 2017)

Even when Randy was asked about what he might do with the center if he had unlimited funds and absolute decision-making freedom, his response was rooted in the idea of providing material resources to students, albeit in a cool, digital, Netflix like fashion. One of Randy's concluding thoughts was this: "I would like to just make everything as, I'd like all the media and the human computer interface which grants access to media to match the, what do you say in English, the newness of the facilities here" (Randy, CC Coordinator, interview transcript, p. 9, June 29, 2017). The second interview I conducted with respect to the Carey Center was with Joyce, a student employee who had been there for just under a year.

One of the main themes to run through my interview with Joyce was the idea of rules and limitations. After mentioning that her role was to check students in and out of the facility, I asked if there were any other responsibilities that she had. She mentioned informal tutoring, recommending movies and reading materials, and lastly, enforcing rules. Elaborating, Joyce said, “just enforcing rules. Sometimes we have students sleeping or just doing stuff they’re not supposed to do so I just enforce those rules” (Joyce, CC Student Employee, interview transcript, p. 1, July 31, 2017). When asked about the overall mission of the center she spoke of the institution as a place for students to be immersed in the language as only English was allowed to be spoken in the center. To this point, Joyce said, “If they’re found doing anything else then we have to ask them to take out English homework” (interview transcript, p. 1, July 31, 2017).

Some evidence of innovation was found as the interview progressed. As I pushed for more details about the center, Joyce also discussed movie nights where students could come after hours and watch projected movies and get credit for a class. When asked about how she thought the center was maintaining relevance in today’s technological climate, Joyce responded:

> I mean, I think it’s a place where they can get help one-on-one rather than just using the Internet. Because there’s, myself, my co-workers, Randy, who are here to help them and explain to them whatever concepts that they’re having issues with rather than them just reading because if they have a question they can ask us rather than going and looking it up again. (Joyce, CC Student Employee, interview transcript, p. 2, July 31, 2017)

In this sense, the center seemed to be functioning like a traditional laboratory but with the addition of an informal tutoring component. When asked about whether or not the center could potentially be taken over by other departments or other units on campus, Joyce’s response was, “Yeah, I think so because it’s just mainly the Native Accent programs and the lending of materials and I guess other departments could lend materials if needed” (interview transcript, p. 3, July 31, 2017) As a followed up, I asked Joyce if there was any component of the center that might be particularly difficult to hand over to another department and here, she spoke of the benefit of having a common shared space. She said:

> I think it's really nice for them to have an area where it's just everyone practicing the same thing. They're all studying English in this one area whereas, if they were in the library, it's with other students who aren't necessarily doing the same things, studying the same things. Here, they have other students to ask help from. (Joyce, CC Student Employee, interview transcript, p. 3, July 31, 2017)

Her response here reinforced the idea that the center was mostly a traditional space with a nice face-to-face informal tutoring component to it. Again, both Joyce and Randy's descriptions of the center made me think that it was a smoothly operated but traditionally oriented laboratory type space. This was also evident in Joyce's response when I asked her if there were any other functions of the center that we hadn't discussed yet. She responded, "I don't really know because I just see them here doing homework. I haven't actually noticed anything else" (Joyce, CC Student Employee, interview transcript, p. 2, July 31, 2017). Ultimately, my sense from talking with Randy and Joyce about the Carey Center was that the facility was new and beautiful but conservatively chugging along as it provided relatively basic services to the English language learners on campus.

These five narrative profiles provide a general sense for each of the centers included in this study. Having established these characterizations of each center, I now offer the following two sections of this chapter. The next section provides a bit of quantitative context and derives from the four-step coding analysis. Specifically, these figures help to quantify and qualify both these introductory narrative profiles and the subsequent discussion of each center with respect to the research questions of the study.

This discussion of each center according to the research questions comprises the third and final section to this chapter.

Quantitative Results from the Four-step Coding Analysis

According to Saldaña (2009), the results from qualitative coding can be quantified in a variety of ways. The following figures in this section provide combined frequency counts per center with the goal of providing additional transparency and to demonstrate how the findings discussed here relate to the conclusions found in Chapter 5 of this dissertation. The first figure, Figure 4.1, displays the combined frequency counts per center for the structural codes which were applied during the first phase of the four-step coding analysis.

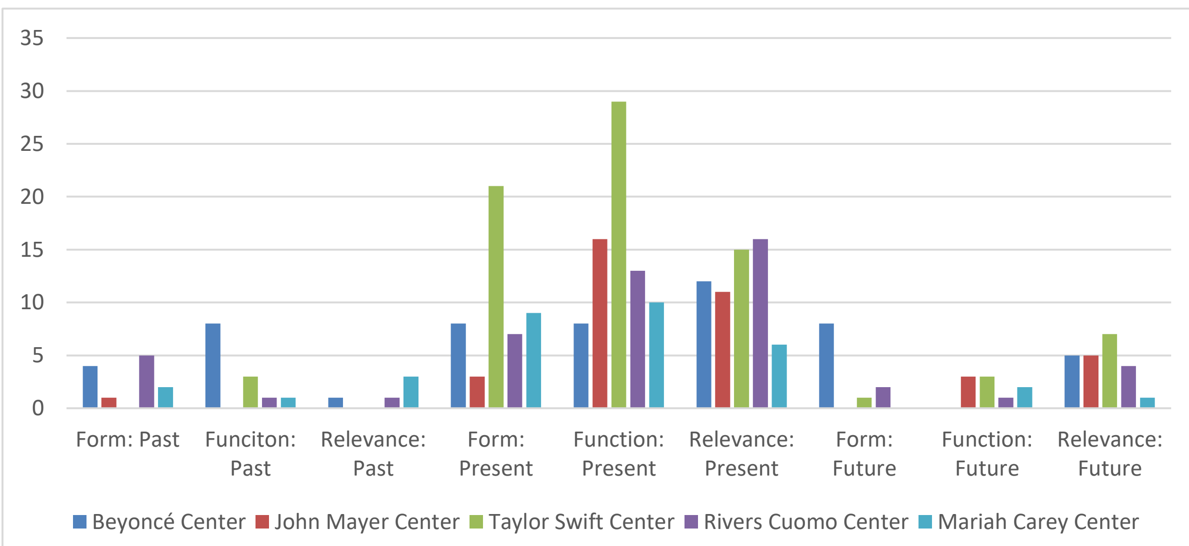

Figure 4.1 Combined Frequency Counts per Center: Structural Codes

As Figure 4.1 demonstrates, interviewees tended to focus their comments on the present forms, functions, and relevance. By contrast, the past and future contexts were not as commonly discussed by interviewees. In fact, the Mayer and Swift Centers did not discuss issues of past relevance at all. The only substantial discussion of the past context was found in the category of function. Here, the Knowles Center stood out among the group as the experienced representatives of the center were able to go into great detail about the historical roots of their institution. Regarding the future context, Figure 4.1 shows that the most commonly discussed topic was relevance. This finding is not necessarily surprising as one of the final interview questions was tailored to elicit responses on this subject. Although, on its own, Figure 4.1 does not allow for any definitive conclusions to be drawn as it displays only general trends that emerged during the first round of qualitative coding. The second round of coding, in vivo coding, is not represented graphically as the results of the coding process were too complex to display in any sort of synthesized visual format.

Therefore, the second figure, Figure 4.2, provides additional insight as it highlights the results from the third round of qualitative coding, the focused coding round.

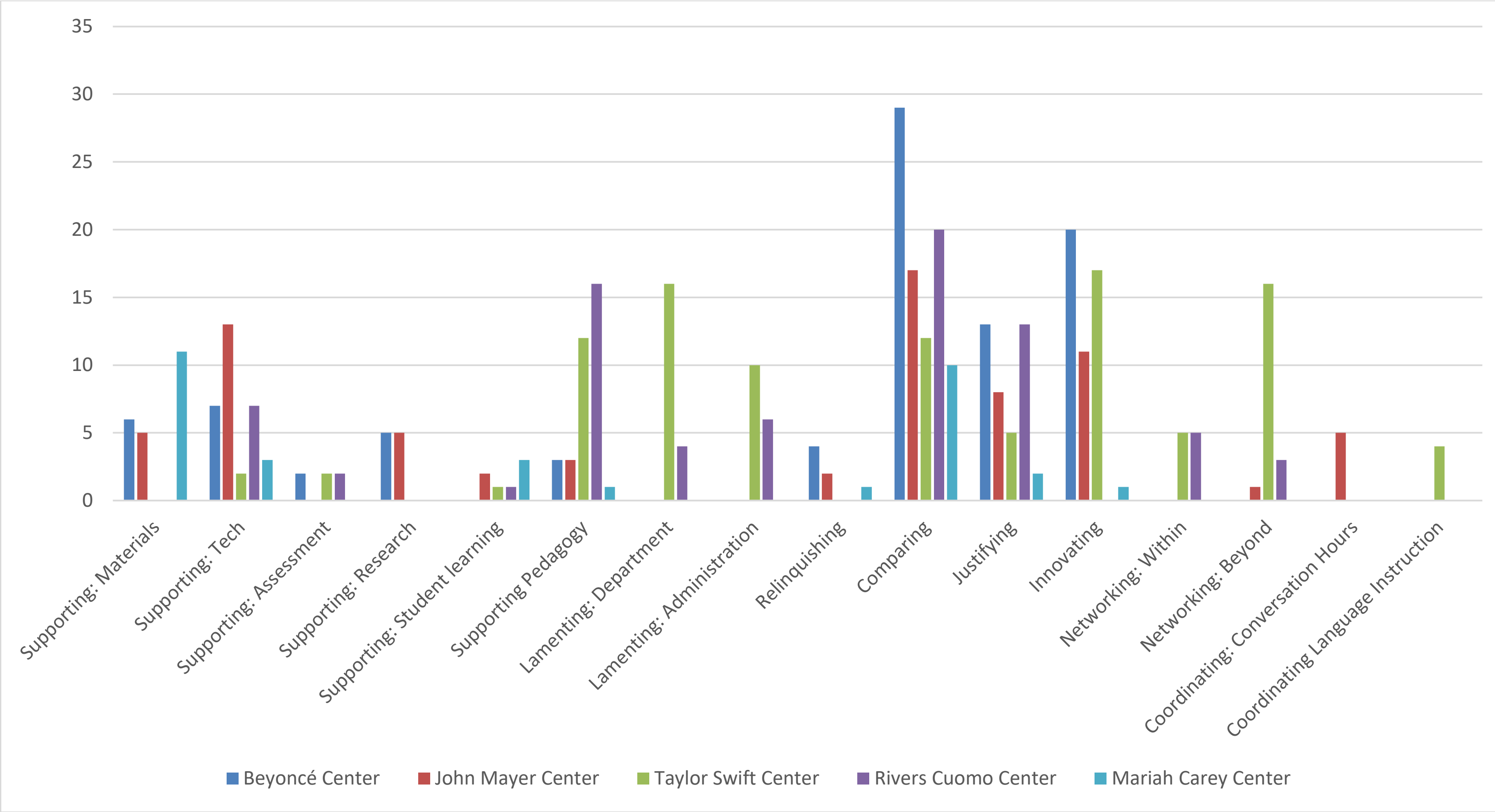

Figure 4.2. Combined Frequency Counts per Center: Focused Codes

As Saldaña (2009) indicates, the focused coding round of data analysis is the first step at reconstructing the data after it has been fractured during the initial rounds of coding. Figure 4.2, although still quite diverse in categories, reflects this reassembling of data that was fractured during the in vivo coding phase. The most prominent codes displayed in the figure included “Comparing,” “Justifying,” and “Innovating.” With respect to the code, “Lamenting,” only the Swift and Dylan Centers showed evidence of this code. A number of other codes represented similarly isolated contexts. For example, Figure 4.2 shows that the Swift Center was the only one to discuss the function of coordinating language instruction. As for coordinating conversation hours, the only center to reflect this code was the Mayer Center. Both the “Supporting: Materials” and the “Supporting: Research” codes were exclusively represented by the Knowles and Mayer Centers. As for the “Networking” codes, the Swift Center stood out among the group in the area of establishing partnerships beyond the university setting. Again, these data contribute to the overall analysis of each of the five centers. In addition to the relevant interview excerpts, they provide an overarching sense for the ten interviews that made up the bulk of the data for this project. The next figure in this series serves as a transition between these quantitative representations and the last section of this chapter. Figure 4.3 displays the combined frequency counts per center for the theoretical coding phase.

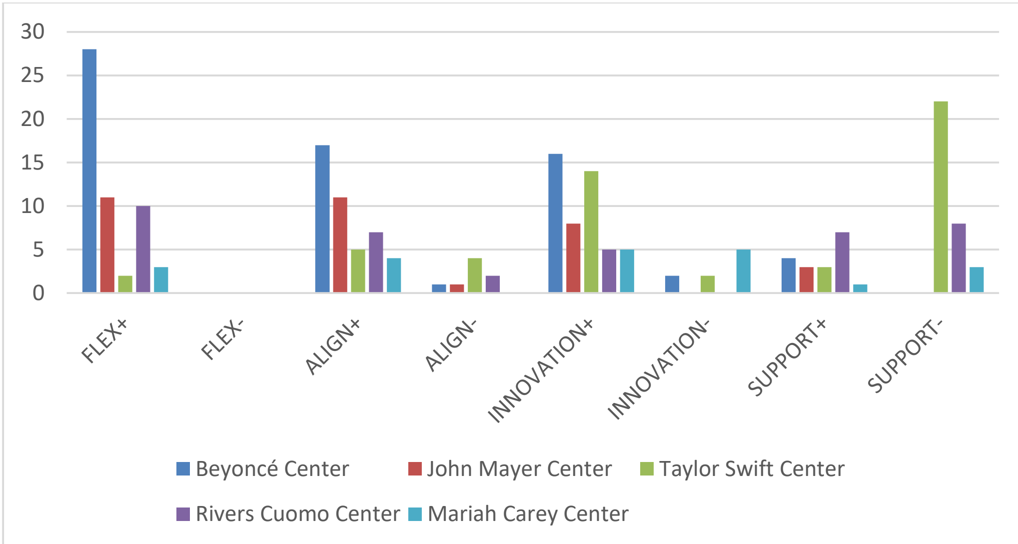

Figure 4.3. Combined Frequency Counts per Center: Theoretical Codes

A few noticeable outliers can be observed in Figure 4.3. First, the Knowles Center is the clear forerunner in flexibility, alignment, and innovation. It was only in the category of institutional support that the Knowles Center fell slightly behind the Dylan Center which led the group in that category. However, perhaps the most noticeable feature of the Figure 4.3 is the complete absence of “Flex-” codes. Although I attempted to read both what was present and what was not present in the transcripts, I found no evidence to suggest that any of the five centers were particularly inflexible within the contexts of their own corresponding institutions. That is, there were no examples of unmet demands for change. Some centers, like the Carey Center, had fallen into a bit of a rut with respect to innovation but this did not mean that it was necessarily inflexible to any outside forces.

One point of clarification must be made regarding the theoretical code pairs for “support” and “alignment.” Some centers discussed positive support from the larger institution while at the same time noting an antagonistic relationship with the languages departments. Similarly, some centers discussed functions that seemed to be well aligned with their university's overall mission but poorly aligned with departmental goals. As a result, the frequency counts for these two pairs of codes do not necessarily reveal the intricate complexities of these topics. For this deeper understanding, the findings from all of the data points must be considered holistically as any overreliance on one particular aspect of these data could lead to possible misinterpretation.

The three figures included in this section of the chapter help to bridge the introductory narrative profiles with the following presentation of related findings. This last section displays the relevant findings according to the three core research questions of the study and provides supporting examples from each of the five LRCs.

Findings According to Relevance, Function, and Form

In this concluding section, I outline relevant findings according to the three core research questions of this study. For ease of reference, the research questions have been included here.

1. How has the organization of language resource centers changed over time?
2. In what ways, if any, do language resource centers contribute to the efforts of foreign language teaching and learning?
3. How are language resource centers still relevant, if at all, today?

Specific findings for each of the five language centers will be provided as I address these foundational research questions. The following sections pertaining to the core research questions are presented in reverse order and begin with findings involving the notion of relevance.

Findings Pertaining to Relevance

This section presents the findings most applicable to the third foundational research question: How are language resource centers still relevant, if at all, today? As a point of departure, I have included Figure X4 which situates each language center on the four theoretical axis points that emerged in the final phase of qualitative coding. The values represent the residual scores of the theoretical code frequency counts that were included in Figure 4.3. To offer a clarifying example for how to read the figure, the Carey Center's "support" score of -2 represents the result of subtracting the number of "SUPPORT-" theoretical codes from the number of "SUPPORT+" codes for the two interviews associated with the center. After coding the two interview transcripts associated with the Carey Center, there was a total of one "SUPPORT+" code occurrence and three "SUPPORT-" code occurrences. Subtracting the three "SUPPORT-" codes from the one "SUPPORT+" code resulted in the final residual count of -2 for support which is represented by the very top line in Figure 4.4. The rest of the values included in the figure were calculated in the same way.

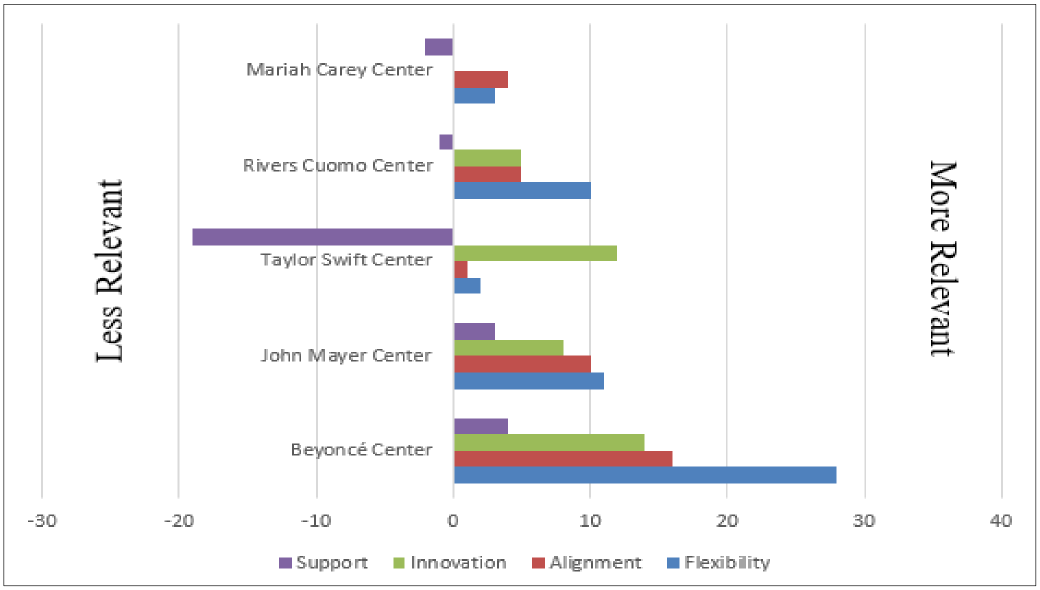

Figure 4.4. LRC Relevance: Flexibility, Alignment, Innovation, and Support

As Figure 4.4 demonstrates, most of the centers in this study exhibited positive trends toward relevance. Indeed, the only negative scores were in the area of support. Any proper discussion of relevance demands an answer to the following question, "Relevant to what?" As I analyzed the data and reflected on the results of the analysis, I began to see that there were different layers of relevance embedded within each of the language centers included in this study. These layers required a much more sophisticated interpretation of relevance than the one I had initially identified for the study. This initial understanding of relevance was mostly restricted to the relationship between the language resource center and the broadly defined field of foreign language education. However, I soon realized that this notion of relevance was insufficiently broad. Consequently, I shifted my understanding of relevance to include three particular relationships: center-department, center-institution, and center-community. To offer a clarifying example of this complexity, consider the case of the Swift Center.

Based on Figure 4.4 above, the Swift Center's extremely low support score may be an indication of irrelevance. When you also consider the fact that it's alignment and flexibility scores were close to the break-even point, the argument for irrelevance is even stronger. And yet, the center's innovation score is only two points behind the Knowles Center which leads the group in that category. Furthermore, the Swift center's innovation efforts, as Chapter 4 demonstrates, primarily dealt with extra-departmental and extra-institutional programs that were geared toward the surrounding community at large. Consequently, the Swift Center was an example of high relevance with respect to the center-community paradigm and arguable irrelevance with respect to the center-department and center-institution paradigms. These interpretations of relevance and irrelevance demand an answer to yet another important question: "How exactly are the notions of support, innovation, alignment, and flexibility related to the issue of relevance?"

First, it should be noted that these four theoretical categories were not selected a priori. Rather the core themes emerged from the meticulous four-step coding process that was used to analyze the interview transcript data. Although other criteria for relevance might exist, these were the measures that surfaced as a result of the data analysis. These measures were then organized into three paradigms of relevance: center/department, center/institution, and center/community. Figure 4.5 displays a visual representation of the relevance paradigms with each of the centers situated within the model in such a way that best describes their unique characteristics for relevance.

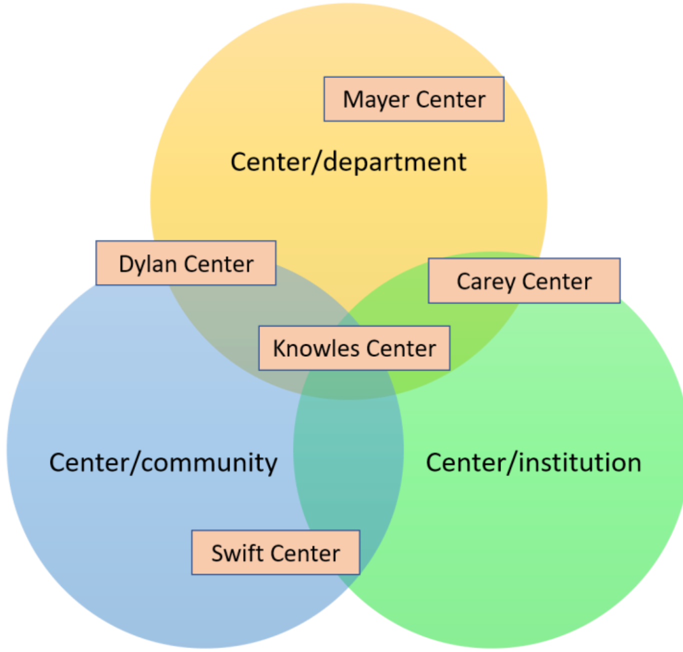

Figure 4.5. Relevance Paradigms

As Figure 4.5 shows, the majority of the centers seemed to best fit, either fully or partially, within the center/department paradigm of relevance. Only the Swift Center is displayed as being entirely detached from that center/department relevance model as it was firmly rooted in the center/community relevance paradigm with some indication of belonging also to the center/institution paradigm. The Knowles Center was the only center that fit within all three relevance paradigms although, as Figure 4.5 shows, it leaned slightly in favor of the center/institution model. Both the Dylan and the Carey Centers were also situated at overlapping sections with the former connected to the center/department and center/community paradigms and the latter associated with the center/department and center/institution paradigms. The Mayer Center was firmly rooted in the center/department paradigm as an excellent example of relevance for that particular relationship. Again, although these representations are informed by the data analysis for this study, each center's precise location within these three spheres of relevance can be somewhat fluid. In the following sections, each center's level of relevance is discussed and supporting evidence for each case is provided.

Relevance of the Knowles Center

Because of the Knowles Center's high levels of flexibility, support, alignment, and innovative efforts, the center stands as an impressive example of 21st century relevance. However, as Figure 4.2 shows, it was not necessarily the most relevant in every paradigm. Where the center seemed to shine the most was in its relationship with the overall institution to which it belongs. An excellent example of this symbiotic relationship comes from an excerpt from my interview with the center's director, Tiffany. She said:

> So, the professorial faculty have the traditional triad: teaching, research, and service, right? We have that as well but ours is professional service, teaching, and citizenship. Professional service involves all of this that I've been talking about. So, let me take as an example, a professor in the English department who is interested in doing textual analysis using some of these digital tools. So, he has that sort of three-pronged expectation that he's got to do but we can come in and say, 'OK, here's a tool that will help you do what you want to do and here's how to use it' and we can help him learn how to use the tool and learn and to analyze the results. Occasionally, we are asked to help produce, to actually create, write software that does the analysis but again that component is falling away because there are more and more really good tools out there already so it becomes more of a need to identify them and support their use mainly. Install them on our servers, make sure that people know how to use them, make sure people know how to get results. (Tiffany, KC Director, interview transcript, pp. 4-5, June 16, 2017)

Here, Tiffany used an example not from the typical foreign language department, but from the English department. This is representative of the fact that the Knowles Center serves the needs not only of the language departments on campus, but all fields connected to the humanities. This breadth is a direct byproduct of the fact that the Knowles Center now exists as a conglomeration of smaller traditional centers, only one of which was the more traditional language laboratory. Now, the center performs a multiplicity of functions ranging from in-house technical support to offering research assistance for projects that fall within the field of digital humanities. However, the center's influence reaches even beyond the discipline of humanities to include other departments and colleges within the university. As an evidence of this, Tiffany related the following example:

> I mean, that's where things are happening now and going forward. It's interdisciplinary. It's drawing on methodologies and expertise from other disciplines to do things that you never could do before in the traditional kind of research that you do. You know, one famous example at [the university] is one of our classics professors has collaborated with, for several years, with somebody from engineering. Anyway, they were doing ultra-spectral analysis of ancient scrolls that had been burned. So, they just had these charcoal blackened scrolls and they were able to do these multispectral analyses where they could read the different layers of charred manuscript and actually see what was on them. (Tiffany, KC Director, interview transcript, p. 11, June 16, 2017)

The two accounts of center/institution relevance included here were what set the Knowles Center apart from the rest of the group in this category. However, there were also examples of center/department relevance as well as center/community relevance.

The center/department relevance for the Knowles Center is perhaps most evident its foreign language testing center and its social community kitchen/lounge space. Both of these facilities were heavily utilized by students and faculty. Furthermore, the center did not have to promote the utility of these spaces, rather their utilization seemed to be rooted in true departmental needs. As for center/community relevance, there were two comparatively weak examples that emerged during my interviews with the center's representatives. The first, as Tiffany pointed out in our interview, was that the Knowles Center had played a role in developing important software programs that were used by many other institutions. The second connection to community was that the center's physical spaces were sometimes used by summer camps and programs. Although not perfectly balanced, these examples indicate that the Knowles Center was the most balanced of the centers with respect to overall relevance. Another somewhat balanced center was the Dylan Center.

Relevance of the Dylan Center

Like the Knowles Center, the Dylan Center was also relatively well balanced with respect to relevance. However, this balance was mostly evident in terms of the center/department and center/community paradigms. As for the center/community programs, the term community here refers specifically to the professional community as the Dylan Center was particularly adept at bringing in experts from outside of the institution to work with the languages departments on campus. As for the evidence of the center/department relationship, relevance was apparent in the technical, pedagogical, and professional development support provided to the language faculty. The technical support was provided in terms of hardware, space, and hands-on support with the university's learning management system, Canvas. In-house pedagogical support was offered in the form of video editing including format conversion and adding subtitles. Assessment was another area where pedagogical support was provided by the center. The center/department relationship was also mentioned by Bill, the center director, as he explained some of the governance model. In reference to the center, Bill explained:

> It also has an oversight committee that is a faculty based committee: virtually one member from every language. It's fairly inclusive and we don't have that many languages that we teach here. […] So, you know, I have maybe a meeting a quarter in which I try to watch all the policies and changes and initiatives and so all those people know. (Bill, DC Director, interview transcript, p. 3, August 1, 2017)

This particular excerpt demonstrates the success that the Dylan Center has had with respect to shared governance. Like the Swift Center, the Dylan Center maintained a strong commitment to the center/community paradigm. However, whereas the Swift Center's community outreach programs often tended to clash with the language departments' goals, these two areas were much more aligned at the Dylan Center. In conclusion, the Dylan Center's relevance was most evident at the community and departmental levels. With respect to the center/institution relationship, no specific examples emerged from the data analysis.

Relevance of the Swift Center

In comparison to the other four centers in this study, the Swift Center had the most complex profile with respect to relevance. To begin, the center's scores for flexibility and alignment were particularly low. Additionally, the score for support was the lowest of the group. And yet, the center came in second place in the area of innovation with only the Knowles Center surpassing it. As I reflected on the Swift Center's profile, I began to make connections between what I was seeing in the interviews and one of the center's particularly unique attributes. Interestingly, this was the youngest center of the group having been opened just seven years prior to my visit. As I reflected on the interview data, I began to see that flexibility was not as commonly discussed here because, unlike the other centers, the Swift center did not go through the evolutionary process from language laboratory to language center. It wasn't necessarily that the center was inflexible, but rather there had been fewer events in the center's history requiring such flexibility. Despite the center's relatively recent establishment, it had managed to initiate several innovative programs, most of which were situated in the center/community paradigm. These efforts, rather than being seen as potential benefits to the department, were often interpreted as rogue endeavors that encroached upon the language department's territory. Even when particular initiatives seemed to be well aligned with broader institutional goals, this animosity between the center and the department often proved to be a discouraging force. Here, Ledgerwood's (2013) recommendations for establishing a new center with the guidance of multiple advisory and oversight committees, might have helped to avoid the tense center/department relationship. And yet, it would be inaccurate to label the Swift Center as irrelevant. In fact, it's strong innovative community outreach programs are an indication that the center is extremely relevant within the center/community paradigm. Furthermore, high levels of relevance could also be seen with respect to the center/institution paradigm. Alignment between the center and the institution was evident in the program directed by Tyler, one of the center's employees. In our interview Tyler explained:

> Originally, our mission was just to provide a pathway, 'just' was never said but I felt like it was 'just' and there was more that needed to be attend to. So, what I've, what has evolved, and the public and [the director has] embraced this is that this is an opportunity to merge and actively recruit heritage language speakers and learners and immigrants and refugees into a college track, bilingual/bicultural education. (Tyler, SC Employee, interview transcript, p. 6, June 16, 2017)

These outcomes were mutually beneficial to both the center and the institution. And yet, there was little evidence to suggest that this program was supported or in any way endorsed by the university's language department. By contrast, the Carey Center seemed to enjoy a much more stable set of professional relationships.

<u>Relevance of the Carey Center</u>

The Carey Center did not particularly stand out on any of the four main measures of relevance. Indeed, there was little evidence from the interviews to suggest that the center was well supported, well aligned, innovative, or exceptionally flexible. However, neither was there much in the data to suggest that the center was doing poorly on any of these four criteria. The center simply seemed to be operating at a comfortable and convenient pace. And yet, the center appeared to be sufficiently relevant, particularly within the center/institution paradigm. In service to the broader institution, the center acted as an informal tutoring center for students who were learning English as another language. For these students, the center provided a common space where students could come to access various authentic video and audio materials as well as practice their pronunciation using a specialized software program. Compared to the other centers in this study, the Carey Center might seem a bit stagnant with respect to form and function. And yet, along the lines of relevance, the center seemed to be fulfilling its duties as intended. Therefore, at least in the sense of relevance, the Carey Center was also relevant, at least within the center/institution paradigm. The last of the five centers, although lacking evidence of relevance with respect to institution and community, was a model example of relevance within the center/department paradigm.

Relevance of the Mayer Center

The Mayer Center scored highly on a number of the relevance criteria measurements. It's score for alignment, in particular, was second only to the Knowles Center. For the Mayer Center, the alignment was all about the relationship between the center and the department. This strong bond was made possible because of the center's role in coordinating the conversation hours attached to various language courses offered by the languages department. In her own words, Alisha described the connection to conversation hours in this way: "A big component is the scheduling of conversation labs and then also kind of a coordination and supervision of those labs. So, training students, helping them learn how to prepare materials, teaching them basic pedagogy, stuff like that." In a more direct way, Alisha even mentioned the center's role as coordinator of the conversation labs as being the main reason for how the center has maintained relevance. She said:

> That's the question that I'm always asking myself, is how do we stay relevant? And so, the big thing is realizing that language is all about people and it's all about interaction. And that, I think about the language labs of the past where students would come in and they would just talk to a computer screen, or even if they'd be talking to each other, like a partner, they'd still be using technology. And sometimes, I think there's a lot of value in stripping that away and that's why the conversation labs, I think, are really what have made us relevant. (Alisha, MC Director, interview transcript, pp. 6-7, July 17, 2017)

Of the five centers, the Mayer Center was the only one to play a central role as coordinator of conversation labs. Indeed, it was this robust service to the department that allowed for such a strong center/department relationship to exist. As a byproduct, the center was continuously being used by the department for various formal and informal gatherings. The Mayer Center offered additional services besides coordination of the conversation hours but there was no doubt that this particular function was the main driver behind the center's relevance within the center/department paradigm.

<u>Conclusion of Relevance</u>

In the previous sections I demonstrated how each center was relevant in one way or another. Some centers were relevant with respect to their home institutions and others were more relevant to their surrounding communities. Some, like the Mayer Center, were specifically relevant at the departmental level. It must be noted, however, that these measures of relevance are not clear cut. Indeed, as Figure X4 demonstrates, the five centers are situated along a broad continuum made up of the three main paradigms. Also, none of the five centers included in this study could be labeled as blatantly irrelevant. And yet, it would not be difficult to imagine a center which is poorly supported, misaligned, inflexible, and stagnant in function. Low marks on all of these measures would no doubt present a strong case for irrelevance. Of course, any center ranking low on all of these four criteria would probably not exist for very long. As the history of the evolution of language centers revealed, some centers died out as they failed to meet the demands of a changing technological, methodological, and pedagogical landscape. Each of the centers in this study appeared to be thriving in at least one of the three paradigms.

Perhaps the main finding regarding relevance is that it is not a binary description. Centers are not relevant or irrelevant. Rather, this study demonstrates that there are varying levels of relevance and that, although a center might be irrelevant to one constituent, it might be highly relevant to another. On the rare occasion, some centers, like the Knowles Center, appear to maintain relatively strong levels of relevance on all three fronts. Like the Knowles Center, these centers are well supported at all levels and enjoy a level of freedom and financial stability that enables them to stay well aligned, flexible, and innovative as a center. Struggling centers might consider a sort of self-evaluation along these three paradigms in order to better understand their own levels of relevance pertaining to department, institution, and community. These centers might evaluate their core functions and ask if what they are doing is truly aligned with the needs of the department, institution, and community. Any realignment will inevitably require a center to be flexible as it adapts to meet these ever-changing needs. Additionally, this flexibility might come in the form of innovative programs or activities that can realign the center’s mission with those of the other parties involved. Finally, these efforts can only occur when sufficient support is present. Poorly supported, the center will continue to struggle in its efforts of realignment.

Findings Pertaining to Functions

Having gained a better understanding of relevance, attention can now be turned toward the issue of function. Many functions of the five centers have already been discussed but I have yet to present them together in one comprehensive space. Thus, Table 4 displays the various primary and secondary functions pertaining to each language center.

Table 4. Primary and Secondary Functions of Centers

Center	Primary Function	Secondary Functions
Knowles Center	Research support	Materials library, computer labs, small group classrooms, video conferencing support, testing center, dedicated social space, software development, tech support
Dylan Center	Professional development	Computer labs, tech support, assessment support
Swift Center	K-12/University partnership program	Federally funded language programs, research support, professional development
Carey Center	Computer lab and homework space	Specialized software provider, pronunciation booth, materials library, informal tutoring support, social spaces
Mayer Center	Conversation lab coordinator	Professional development, develop curricular materials, social spaces, computer stations, materials library.

With Table 4 as context, these next sections highlight findings related to the second foundational research question of this study: In what ways, if any, do language resource centers contribute to the efforts of foreign language teaching and learning? It is important to note that the main function for each center is based on the data that emerged during analysis. Indeed, some centers might claim several primary functions but for the purpose of this study, only the most distinguishing function was included as the primary function. Others were included in the third column of Table 4 as secondary functions.

All of the functions listed in Table 4 play a role in foreign language teaching and learning. However, not all functions listed are equal in their overall contributions to these efforts. For example, providing space for a computer lab and maintaining the machines does not contribute to the efforts of foreign language education in the same way as say direct professional development. And yet, I soon began to realize that measuring the impact of each of these various functions and their associated contributions was beyond the scope of this study. Nevertheless, identifying these functions played an important part in understanding issues of overall relevance. Consequently, the subsequent discussion of function is oriented towards an overall comparison of the functions exhibited by the five centers studied here and other language center functions that were identified in the review of literature in Chapter 2 of this dissertation. In thinking about this comparison, I hoped to better understand the current and potentially future models of language resource centers. And so, although the following sections of function provide a partial answer to the second research question, they do not suggest any sort of ranking of which functions were found to be most helpful to foreign language education overall.

Functions of the Knowles Center

Based on my analysis of the data, one of the primary function of the Knowles Center was to provide research support to the various departments in the college. This support was provided under the banner of digital humanities. In this common space, partnerships between technologists and humanists were formed to create research teams that sought answers to related questions. Elaborating on this important function of the center, Tiffany explained the following:

> There is also in the digital humanities, sort of a two pronged, I guess you could call it, two camps. One is digital tools and methods like I described. The other is

> the study of digital technologies as they impact human discourse and communications. Ok, so how has the existence of let's say Twitter, affected communication among various groups? How has it affected language? And so, it becomes, the technology also becomes the subject of research as well as a set of tools. There's a little bit of a tension between those two groups but we're pretty firmly in the digital tools and methods because of our background, because everybody here has a technical background. (Tiffany, KC Director, interview transcript, p. 8, June 16, 2017)

Given these technical backgrounds, the technologists in the Knowles Center were often tapped as research partners for faculty in the College of Humanities. When I asked Tiffany about how her center differed from maybe other language resource centers, her answer again was rooted in this notion of research support. She said:

> I think that the main difference lies in the amount of support and breadth of what we do. Most universities and colleges will have a language support center of some kind but it might be one person running a computer lab. Here we have technology expertise. We have programming expertise. And we have people with backgrounds in humanities that can sort of bridge the gap between the technology and the humanities research so I guess we're much more a full service. (Tiffany, KC Director, interview transcript, p. 8, June 16, 2017)

In addition to the primary function of research support, the Knowles Center performed a number of secondary functions. Most of these functions, like providing spaces for testing, socializing, and to use computers, have already been discussed in this chapter. However, to expand on what has already been said of these functions, it should be noted that some activities like maintaining a materials library, providing access to computers, and developing custom software seemed to be declining in popularity. Other functions like the utilization of the small conference rooms, social spaces, and testing center appeared to be in comparative high demand.

Functions of the Dylan Center

As indicated in the narrative profile for the Dylan Center, its most defining function seemed to be in the area of professional development. This “intellectual” component of the center was a topic that emerged again and again throughout my conversations with Bill and Dee. For example, when I asked about the overall mission of the center, Bill’s response was mostly related to the notion of professional development. Bill said:

> Yeah, so there’s just support, direct support. There’s training for technological innovations and then there’s professional development. So, you know, lecturers maybe who have been teaching language for twenty years, they still need, it’s an old dog but they need to learn new tricks or new things. The new concepts, new ways of thinking about language, culture, that are developed and they need to hear about it. (Bill, DC Director, interview transcript, p. 5, August 1, 2017)

However, despite the fact that professional development was the most distinguishing function of the Dylan Center, it was not the only center to provide this service. In fact, the Mayer Center also boasted a robust professional development program but the two centers differed in how they approached this particular function. The Dylan Center provided these opportunities by connecting their local faculty with external experts. In contrast, the Mayer Center provided more of an internal approach to professional development as Alisha, the center director, would offer a variety of workshops each semester. Apart from this primary function, the Dylan Center also provided other secondary functions in the form of providing space, tech support, and assessment support to faculty and students. However, my sense was that the professional development function often seemed to eclipse these other functions with respect to importance.

Functions of the Swift Center

The primary function of the Swift Center was the community outreach program that served to provide a pathway for K12 language students to continue their studies at the collegiate level. Indeed, most of my conversation with Tyler, the Swift Center employee who was in charge of this program, revolved around this particular function. In fact, when I asked Erika, the center director, about a possible second person to interview, she did not hesitate in recommending Tyler as an important person to speak with regarding the Swift Center. As a close second, the federally funded project that offered languages to military personnel was also a defining function of the Swift Center. When asked about the main functions of the Swift Center, Erika, the director, responded by saying:

> To be a locus, a place for people at the university and outside the university interested in second language acquisition and second language pedagogy. So, to support research and inquiry into those things and then secondarily to support, to provide support, training, whatever, to the second language teaching profession whether it be here at the university or you know, K12. Yeah, so those are the two primary things and then also to, you know, serve the larger community. (Erika, SC Director, interview transcript, pp. 6-7, June, 16, 2017)

These primary functions were followed by some discussion of other secondary functions including the occasional offering of a professional development workshop and some past attempts and providing research support to faculty members. Again, the tense relationship between the Swift Center and its corresponding languages department and administration were likely the reason for why the most defining functions of the center were those that dealt with the surrounding community.

<u>Functions of the Carey Center</u>

For the Carey Center, the defining function seemed to be to provide a space for English language learners to come and work mostly independently on tasks that had been assigned to them in their respective classes. These activities ranged from simply working on English homework to using the Native Accent pronunciation software in the soundproof booth. Joyce, the student employee, also spoke of an occasional impromptu tutoring session that would occur when a student came to her with a question about the language or their homework. Beyond these basic and comparatively traditional functions, there was little mention of any sort of innovative activities. Even Randy’s description of the materials library seemed to suggest that the center’s functions were reminiscent of those of past language laboratories. In describing how the materials library functioned Randy said the following:

> If they come in and they say, and a student says to us, we ask them, ‘hey what do you want to work on today?’ And they say, ‘Well I’m having trouble with my grammar.’ We will recommend to them another, a different book on grammar that is maybe a competitor of the Azar-Hagan series and probably has a different take on things. Sometimes this can be really helpful you know, just to get a different, as I say, a different take on things. (Randy, CC Coordinator, interview transcript, p. 5, June 29, 2017)

In addition to alternative grammar materials, Randy also talked about how the center provided quality headphones and microphones which could be used by the students for their pronunciation practice. He explained how even though students usually had their own headphones, they were often of such low quality that the voice recognition software built into the pronunciation program had difficulties recognizing voices on these personal devices. Again, what seemed to distinguish the Carey Center from most of the other centers in this study was its access to active learning spaces. Interestingly, the utilization of these learning spaces as either primary or even secondary functions was not discussed in my interviews with the representatives of the center.

Functions of the Mayer Center

For the Mayer Center, the most defining function was orchestrating and administering the language department's conversation hours. The requirement additional conversation practice, particularly for lower-level language classes, is a relatively common practice in higher education foreign language programs. However, how various institutions implement these programs vary quite significantly. In my own experience, I have been part of departments that have staffed these conversation hours with the help of paid teaching assistants, volunteers, foreign language tutors, adjunct faculty, as well as heritage and/or native speaker upper classmen and graduate students. Although the field of foreign language education seems to agree that additional conversation is a good thing for second language acquisition, there is clearly much to be done with respect to how to effectively offer these opportunities to students. The Mayer Center's solution to this predicament was to take the entire program under its wing and to not only assist in the scheduling of these meetings but to also provide training for the conversation hour facilitators as well. Because the conversation labs were held in the center, the various social spaces were highly utilized while classes were in session. In discussing the connection between space and function, Alisha, the center director highlighted how the utilization of space was also related to social activities and conversation hour practice. She said:

> It's a comfortable place. That's why we have couches. We want students to feel really at ease here and the idea is for them to have a place to come and do conversation labs and so that's more of a structured activity type place. And then they'll also have a place for them to come and ask questions, to study, to work on

> projects for their class. Also, to play games, to have clubs, but really, the idea is it's a place for them to come and put everything they're learning in the classroom to use.

Based on this primary function, the Mayer Center appeared to enjoy relatively high levels of alignment, support, and relevance as it served the very practical needs of the foreign languages department. Of course, like the other centers, the Mayer Center also engaged in a number of secondary functions as well. Among these secondary functions were the professional development workshops, the development of additional curricular materials, and the materials library. Other, less prominent functions included providing some computer stations and technologically enhanced meeting spaces like the multi-purpose conference room.

Conclusion of Functions

These variations in function add to the overall narrative that language resource centers are as unique and diverse as the institutions that house them (Kronenberg, 2017). Although united on some fronts, I have shown how in matters of relevance and function, there is a great deal of individuality to these post language laboratory institutions. Although some overlap was seen in the area of secondary functions, each center seemed to be uniquely defined by a different primary function. This complexity of identities, missions, and purposes carries on into the last section of this chapter as I present findings related to the notion of form.

Findings Pertaining to Form

As I demonstrated in Chapter 2 of this dissertation, language resource centers and language laboratories have undergone a significant shift with respect to form. The audiolingual era language lab was a largely homogenous construction of isolated carrels.

This widely replicated structure began to exhibit significant changes as technological and methodological innovations allowed center directors to become more creative in the designs of their physical spaces. Most recently, the very idea of a physical center has come under question as budgetary constraints have called on language centers to justify their existence. These pressures have led to obligatory innovation with regard to function and form in the 21st Century (MacDonald, 2011). Despite these pressures to convert to virtual institutions, four of the five LRCs in this study enjoyed comfortable and dynamic physical layouts. These issues of form, as they pertain to each of the five centers, are discussed in this final section of the chapter.

Form of the Knowles Center

Over the last several decades, the Knowles Center has undergone a number of shifts in form. Daniel, who has been with the center since 1989, explained how the center began as a traditional language lab which was converted into a center with a broader mission starting in 1981. Daniel explained how at one point, the Knowles Center was moved from its original location to the university library where many of its functions began to be absorbed by a larger, more broadly defined resource center. Eventually, an early director of the center migrated the language related functions out of the library and into a building that had recently been vacated by the College of Business. It was during this time that Daniel joined the center as the recently appointed supervisor. Years later the center would make yet another move into an even newer building where it continues to live today.

In its current home, the center maintains a strong and visible physical presence within the larger College of Humanities. Although its various learning spaces are not all necessarily connected, they are separated by only a short walk down a hall or down a stairwell. As for a virtual presence, the Knowles Center does maintain a website which is hosted by the university. However, this online space is clearly only an ancillary to the physical spaces that make up the center. As I browsed around the Knowles Center's website, I found sections that required me to visit the center in person in order to access what I was looking for. Interestingly, in the "About Us" section of their website, it says that the center provides lab space and access to a variety of helpful materials but there was little information to suggest its central role as a research support center for the College of Humanities.

When I asked Daniel what changes to the center he might implement in the future his answer was rooted in this idea of form. He said:

> So, if I have my way, the computers will mostly disappear as individual work stations and small group clusters with whiteboards or, and large monitors and cameras and microphones and everything that will facilitate interactions around the world. That's my, that's what I would do. (Daniel, KC Supervisor, interview transcript, p. 10, July 28, 2017)

Here again we see evidence of a decreasing role of the center as technology provider as it seeks to reinvent itself as a provider of socially inviting spaces. Lastly, it should be noted that organizationally, the Knowles Center was not housed in any specific department. Rather, it existed as a largely independent unit within the College of Humanities. This last distinction is important as not all centers in this study were organizationally housed in the same way.

<u>Form of the Dylan Center</u>

The Dylan Center was another center that lived organizationally independent of the languages departments which it served. As the Dylan Center was one of the institutions that I was unable to visit in person, my sense of the interconnectedness of its spaces was limited. What I do know about the center's form comes from my interviews with Bill and Dee and from the center's website. From the website, the center appears to maintain a variety of different learning spaces. These spaces range from what appear to be traditionally oriented computer classrooms to more open, multi-purpose learning spaces. The website does seem to reflect a more active online space with links to current events and language related blog entries.

From the interviews, Dee's comments on the possible reduction of computer lab space seem to be of particular interest here. As I've already outlined, Dee questioned the conversion of such traditional spaces by challenging the notion that opening up social spaces would automatically result in a better fit between contemporary LRCs and the current paradigms of foreign language education. Whereas other interviewees were more open to the idea of converting traditional lab setups into more socially inviting spaces, Dee wondered about how these newly imagined layouts would be any different from other social meeting areas on campus. In my conversation with Bill, the Dylan Center director, we also discussed the idea of converting traditional spaces into social ones. The following exchange about laptop carts and social spaces sheds additional light on the subject:

> Me: Yeah, the argument that I've heard and that I've, you know, is articulated for these well-equipped, sort of furniture places, is that they're converting their center into a social space with technology peppered in and I think that's a hopeful direction for language labs.
>
> Bill: Yeah, I don't disagree with that. Now, we continue to have machines there and I still see students in there because [our university] doesn't have a purchase policy. There are many colleges that it's in the tuition and so you have a laptop that comes to you but it's built into the tuition. (Researcher and Bill, DC Director, interview transcript, p. 9, August 1, 2017)

From this exchange, it is apparent that Bill was a little more open to the idea about shifting the center towards more social spaces. But, his openness was still couched within the notion that every student would still need access to a computer. Both from Bill and Dee I got the sense that the Dylan Center was an example of a mostly physical center that was cautiously open to the idea of other LRC forms and models.

Form of the Swift Center

Among the group of five language resource centers in this study, the Swift Center is a clear outlier with regard to form. Like the Knowles and Dylan Centers, the Swift Center was organizationally housed as a separate unit from the languages department. However, where the other four centers maintained highly visible and dynamic physical forms, the Swift Center had very little physical space to claim as its own. What little space it did have was often utilized as traditional classroom meeting spaces where specialized language classes were often held. This limitation of space was explicitly mentioned by the center's director, Erika, on more than one occasion during our interview. Given the center's minimal physical presence, I was curious to see what the center's online presence was like.

First, just as it was somewhat difficult for me to find the physical center on campus, it was similarly challenging for me to locate the website for the Swift Center. The actual link to the center is embedded within a drop-down menu and sandwiched between a rather eclectic group of resources and other links. After I had finally navigated to the actual landing page for the Swift Center, I found it to be a well-organized and apparently active online space. The center's innovative programs are featured on the main page of the website along with a few other functions and initiatives. Compared to the other center's websites, information on the Swift Center's website is well organized in a pleasing and dynamic visual format.

As I reflected on this, I was again struck by the ironic juxtaposition between the center's virtual and physical spaces. With respect to physical space, the center's active and innovative partnerships are quite perplexing. And yet, from the online space, there was less of a mental disconnect between the center's presence and its innovative programs. In this sense, the Swift Center stands as an example of how an LRC might continue to thrive when its physical footprint is reduced to, as Erika described it, a "shoebox."

Form of the Carey Center

Like the other centers discussed here, the Carey Center was organizationally independent from any particular language department. In matters of form, the lush physical facility of the Carey Center was the only center to rival the impressive layout of the Knowles Center. Indeed, much of my interview with the center's coordinator revolved around the notion of form. The irony here is that the Carey Center, being so well-equipped with a robust physical presence, was not nearly as innovative or creative as the comparatively miniscule Swift Center. In fact, these two LRCs might very well stand as an illustrative example of how form might not entirely be a predictor of function.

With respect to the online presence of the Carey Center, it is virtually non-existent. The only reference to the center is embedded within a description of a broader language program. Here, the center is included as a single bullet point among many that make up the overall language program. In fact, had I not received photographs of the center from the coordinator himself, I would be tempted to question whether or not it actually existed. Again, like the Dylan Center, my knowledge of the Carey Center's form was limited to my phone interviews with the center's representatives and the pictures of the spaces I received from them. From the pictures of the space, there is no doubt that the physical layout of the Carey Center appears to be just as impressive as Randy's descriptions. Yet, with its absence of an online presence and my inability to visit the center in person, little can be said with respect to the Carey Center's form.

Form of the Mayer Center

The Mayer Center, unlike the previous four centers, maintains a relatively well-balanced physical and virtual presence. Although not as impressive as some of the physical layouts of the other centers, the Mayer Center enjoys a rather sufficient collection of physical spaces. During my conversation with Nathan, a faculty member who uses the center regularly, he expressed that additional physical spaces would be helpful. And yet, it appeared to me that part of why the Mayer Center enjoyed such high levels of utilization was precisely because of this borderline scarcity of meeting places. By comparison, parts of the Knowles Center seemed to be rather underutilized despite its impressive collection of various learning spaces.

What really sets the Mayer Center apart from the other centers is that organizationally, it was the only center to actually be housed entirely within a languages department. This relationship is further evident on the website for the department. On the main page of the department's website, a direct link to the Mayer Center is displayed prominently among other important features of the department. The first thing I noticed when navigating to the center's page was a large embedded video highlighting the conversation lab function of the center. Additionally, the center's secondary functions were also displayed in this online space. As I reflected on the multiple spaces and forms of the Mayer Center, my impression of the institution as a well-organized and smoothly-functioning departmental appendage was further solidified.

Conclusion of Forms

With respect to form, the five language centers in this study were quite similar. The one true exception being the Swift Center whose access to physical spaces was severely limited in comparison to the other centers. Apart from this anomaly, this cohesiveness in form was somewhat surprising to me. Given the high levels of variation that was found in matters of relevance and function, I suppose I expected an equal level of diversity with respect to form. On the topic of form, the International Association of Language Learning and Technology has been a particularly important source of information. In fact, the most recent iteration of the Language Center Design Kit (Kronenberg & Lahaie, 2011) is full of practical considerations with respect to form. One of the contributors to the volume, Betty Rose Facer (2011), opened her chapter about traditional and virtual spaces in this way: “Language Learning Centers take on an array of shapes, sizes, and technologies that clearly reflect the goals and initiatives of its faculty and students. Some centers are fortunate to have multiple rooms with the additional space for various activities” (P. 75). With respect to the balance between physical and virtual spaces, Facer (2011) wrote that, “Although the past decade saw the change from analog to digital technologies or the creation of the ‘Virtual’ space, a balance or blending of the two environments remains essential” (p. 75). In this dissertation, form was but one of the foundational questions that guided this research project along. In the final and concluding chapter, I address these connections between form, function, and relevance in a more comprehensive summary.

Conclusion

In this chapter, I have endeavored to give the reader a thorough sense of the data that were generated by the interviews, on-site visits, and research journal reflections. These data have been portrayed in a variety of ways including narratively through the introductory profiles, visually through the use of various graphs and charts, and finally categorically according to the three research questions for this study. These multiple frameworks serve as organizational tools for the findings and help to familiarize the reader with each of the five language resource centers.

It is my hope that the findings presented here have provided a transparent look into the data collection and data analysis processes. In the final chapter of this dissertation I begin to theorize about the interconnectedness of form, function, and relevance, and offer my final conclusions for the study.

CHAPTER FIVE: CONCLUSIONS

The purpose of this chapter is to synthesize the previous chapters and then to offer a series of practical applications for two specific and often overlapping audiences: those engaged in LRC research and those either directly or indirectly affiliated with an LRC. These practical applications are informed by the key findings of this study and are rooted particularly within the framework of the three relevance paradigms. This concluding chapter is offered in the form of both practical and theoretical implications which are derived from the findings of this study.

Summaries and Syntheses

Historical Overview and Impetus for The Present Study

In the first chapter of this dissertation I provided a brief historical overview of language resource centers. On one hand, the short historical introduction provides an important contextual background for the current study of LRCs. Yet, at a deeper level, the very notions of form, function, and relevance were firmly embedded within the transformational process from language laboratory to language center outlined in this chronology. Indeed, the evolutionary history of LRCs demonstrates how these institutions remained flexible in form and function in order to maintain their relevance within the constantly changing technological and methodological climate of foreign language education.

In this introductory chapter, I also discussed the various personal and professional events that brought this study to life. I explained how after beginning this dissertation, I had the great fortune of being hired as a new LRC director. This personal and professional transition no doubt played an important role as the study continued to unfold. What started out as a quest to broaden my own understanding of the various forms and functions of language centers, eventually morphed into the more meaningful study of relevance that serves to define this dissertation as a complete body of work. The specific problem that I set out to address with this dissertation was also included in the first chapter but it bears mentioning again here, at least in its more abbreviated form. The problem, as I saw it, was this: Given that language centers require significant institutional investment, very little information is available regarding their relevance to the current paradigms of foreign language education. It is my hope that the conclusions I offer here provide, at least partially, an answer to this problem.

Context and The Creation of Relevant Frameworks

In the second chapter of this dissertation I continued to embed this study within the context of previous relevant research. Here, a two-tiered conceptual framework was introduced as a way to organize these studies according to content (form, function, and relevance) as well as time (past, present, and future). Perhaps the most important takeaway from this review is that form, function, and relevance seemed to be intimately tied to broader contexts. These technological, methodological, and pedagogical contexts were constantly evolving and thus, required language laboratories to remain highly flexible. As I surveyed the literature on these issues, I became concerned at the dearth of rigorous research in the area of language laboratories and centers. Apart from just a few, relatively comprehensive attempts to fill this void (Hocking, 1964; Kronenberg, 2017;

Roby, 2004), studies involving LRCs have been few and far between and too many have relied heavily on anecdotal evidence.

Another important contribution found in Chapter 2 of this dissertation was the articulation of the multi-theory framework used to guide this dissertation along. I explained how the framework draws from other relevant theories in the fields of second language acquisition, educational psychology, and educational technology. I argued how these three disciplines each offered helpful frameworks within their respective spheres but how they ultimately fell short of providing a single theoretical model for this dissertation. Thus, I proceeded to design and carry out the present study using a combination of the related theories to inform my methodological decisions.

Identification and Explanation of Modes of Inquiry

In the third chapter of this dissertation I mostly stuck to tradition as I outlined the methodological practices that were employed in this study of language resource centers. Being principally informed by Creswell's (2013) relatively comprehensive guide to qualitative research, I outlined my plan for how I would collect and analyze the data from this study. My discussion regarding these various analytic tools revolved around the importance of employing methods that were just as flexible and dynamic as the institutions which I had set out to examine. This philosophical decision led me to use interviews, on-site visits, and a research journal as I sought a deeper understanding of each of the five cases included in this multiple case study. For the interview data, I employed a flexible and iterative four-step qualitative coding approach. Lastly, this methodological flexibility was found in my decision to further breakdown the data through the use of narrative analysis which allowed me to bring each of these centers to life for the reader.

Narrative Profiles and Thematically Organized Findings

In the fourth chapter, I presented the findings of this study. The chapter opens with narrative descriptions of each of the five centers. Following the narrative profiles, I then broke down the findings pertaining to form, function, and relevance regarding each of the centers. Conclusions regarding each of these three areas and how they relate to the three overarching research questions of this study are included in the following sections.

Conclusions Pertaining to Form

The focus on form was a result of the first guiding research question of this study: "How has the organization of language resource centers changed over time." What the data have shown is that with respect to form, the five LRCs in this study differ noticeably from the language laboratories of the past century. These differences are apparent in three specific ways. First, contemporary language centers appear to be transitioning toward more social spaces like those found in the Knowles and Mayer Centers. These new spaces, unlike the traditional language laboratories, are human-centered and include things like kitchens, comfortable and flexible seating arrangements, and closets filled with board games and other non-tech materials.

A second noticeable change in language centers over time was the reduction of individual computer stations. Although some centers, like the Knowles, Dylan, and Carey Centers, still maintained computer lab spaces, none of these facilities were organized into individual carrels like the laboratories of the past. Still, these technocentric spaces indicate that some contemporary LRCs have not completely abandoned the organizational norm of their structural predecessors. Some LRCs, like the Knowles Center, still maintain large rooms with numerous, and often empty, computer stations. Others, like the Mayer Center, have reduced these computer stations to just a few tables and have integrated them into more socially-centered rooms.

Finally, a third noticeable difference with respect to organization and form was typified by only one of the five centers in this study, the Swift Center. Although none of the five LRCs seemed to fit the model of virtual language center as discussed by MacDonald (2011) or Yang (2004), the Swift Center was probably the closest fit. Unlike the other centers which had access to multiple physical spaces, the Swift Center was made up of just two small classrooms and an area for offices. This particular setup stands in stark contrast with language laboratories of the past and suggests that future LRCs might continue to shift from physical to more virtual structures.

Conclusions Pertaining to Function

The focus on function emerged from the data pertaining to the second guiding research question of the study: “In what ways, if any, do language resource centers contribute to the efforts of foreign language teaching and learning?” Note that the purpose of this question was to identify the various activities in which each of the centers in this study was engaged and not, necessarily, to draw conclusions with respect to the efficacy of these functions. Table 4 in the previous chapter is particularly important as it summarized the various ways each of the LRCs contributed to the broader context of foreign language education.

What the data has shown is that the functions observed by the five LRCs in this study are similarly aligned with those talked about in prior studies. Specifically, the present studies were found to engage in community building (Jeanneau, 2017, Yaden & Evans, 2017), research support (Sun, 2017), professional development coordination (Van Deusen-Scholl & Young, 2017) and virtual learning orchestration (Gölz, 1999). Furthermore, a few examples of functions emerged as slightly more novel contributions to the general field of foreign language education. For example, the Mayer Center's coordination of conversation hours, the Knowles Center's production of in-house software, and the Swift Center's K-12 partnership all seemed to be pushing the boundaries of how contemporary centers are enhancing the efforts of teaching and learning languages. This diversity in function confirm similar findings by Kronenberg (2017, 2016, 2014) who has consistently found high levels of functional variation among contemporary language resource centers. However, these findings regarding form and function were not necessarily surprising. What was surprising, was the deeper understanding of the notion of relevance that emerged from the data analysis.

Conclusions Pertaining to Relevance

The third and final concluding focus relates to the relevance of the contemporary language resource center to the general field of foreign language education and is rooted in the third guiding research question for this study: "How are language resource centers still relevant, if at all, today?" This particular question has been asked before (Dvorak, Charloteaux, Gilgen, Herren, Jones, & Trometer, 1994; Koerner, 1988; Williams, 1992) and will likely continue to be asked of LRCs. Indeed, the notion of relevance was discussed during almost every interview. On this subject, the analysis of the data led to the creation of three paradigms which provide a framework for how to talk about relevance given the high levels of variability in LRC form and function. The model, as demonstrated in Figure 4.5, is a result of the multi-step qualitative coding process and is particularly informed by the alignment, support theoretical codes. That is, as I reflected on the distribution of these two theoretical codes in particular, this expanded understanding of relevance began to emerge.

Consequently, what the three paradigms suggest is that relevance is not the binary construct that I initially thought it to be. Rather, language centers appear to fall within a range of relevance with each paradigm representing a separate continuum. For example, the Swift Center was highly relevant within the center/community paradigm but exhibited low levels of relevance within the center/institution paradigm and even lower relevance within the center/department paradigm. Although seemingly intuitive, this deeper understanding of relevance was not revealed to me until I had analyzed and reflected on the data from this study. This finding in particular allowed me to conclude this dissertation with a section oriented toward the practical implications for those directly and indirectly affiliated with language resource centers.

Implications for LRC Researchers

One of the main findings to emerge from the literature review found in Chapter 2 was the concerning lack of rigorous research surrounding language resource centers. To this point, Roby (2004) expressed concern in his comprehensive overview of language laboratories and centers. With respect to the studies he reviewed, he wrote:

> They differed considerably in scale, populations, and methodology. Although all concerned language laboratories in some way, they did not all seek to answer the same questions other than the general one of effectiveness. For these reasons, it is difficult to draw conclusions. Perhaps the inconclusiveness of the record is because the investigations that were conducted were not following an agreed-upon agenda. (Roby, 2004, p. 537)

The results of my own literature review revealed that LRC researchers have not made much progress with respect to developing a cohesive agenda. Although comprehensive practical guides for how to manage centers (Ross, 2013), how to design them (Kronenberg & Lahaie, 2011), and how to evaluate them (Simon et al., 2017) have been made available over the last several years, these reports have relied too heavily on action research reports and autoethnographic studies. In light of the extreme heterogeneity of contemporary LRCs, it is little wonder that researchers have relied so heavily on self-studies and anecdotal evidence. Indeed, making sense of such a diverse group of institutions leaves few other methodological options. Furthermore, these practical guides have proven to be of great value to those affiliated with LRCs. In fact, I myself have benefited greatly from them in my role as a new LRC director. However, these praxis-oriented materials need to be continually grounded in frameworks that reflect the complex and constantly changing landscape of foreign language education.

One of the most powerful findings from this dissertation is the conceptual framework outlining the three relevance paradigms of contemporary language resource centers. What these paradigms suggest is that relevance is not the binary construct that I initially thought it to be. Rather, language centers appear to fall within a range of relevance with each paradigm representing a separate continuum. For example, the Swift Center was highly relevant within the center/community paradigm but exhibited low levels of relevance within the center/institution paradigm and even lower relevance within the center/department paradigm. Although seemingly intuitive, this broader understanding of relevance has the potential to significantly shape the future direction of research involving language resource centers. This finding's immediate contribution is that it allows for LRC researchers to cut through the high levels of variability in form and function and to analyze these similarly oriented institutions within their respective relevance paradigm. Of course, just as the LRCs in this study exhibited, LRCs will sometimes be engaged in more than one of these areas at the same time. Nevertheless, this dissertation has demonstrated that each LRC tends to be situated primarily within one of these paradigms while maintaining secondary or tertiary functions in the other areas. Some centers, like the Knowles Center, will still be outliers as they maintain an almost equal footing in all three of these categories, but the groupings are nonetheless important for the future of LRC research.

Furthermore, and as Roby (2004) suggested, what is sorely needed in the area of LRC research is a shared, cohesive research agenda. In my mind, this agenda needs to consist of three key items. First, a framework that enables the discussion of such a diverse group of institutions needs to be established and adopted. This dissertation offers the three relevance paradigms as a way for researchers to group contemporary LRCs as similar units of analysis. Second, a set of highly relevant questions needs to be enumerated and shared among LRC professionals so that collaborative research teams can begin to tackle these issues together. Interestingly enough, work on this second task appears to already be underway. The problem is that the current set of questions has been mostly limited to practical matters with little attention given to theoretical pursuits. A better balance between the practical and the theoretical must be sought out if this area of research hopes to keep pace with the constant flux of the 21st Century. Here again, the three relevance paradigms can offer a starting point for these shared questions. The framework enables LRC researchers to be able to explore language centers within a specific paradigm in order to evaluate their shared forms and functions. Once it is possible to group like-minded LRCs within the same category, researchers should then be well-positioned to ask deeper questions regarding how these centers are contributing to language acquisition. Finally, the last component to this shared research agenda needs to be a collective commitment to the dissemination of these findings to the broader community of foreign language professionals. As the language centers in this study indicate, amazing things are taking place within these institutions and these stories need to be shared. This dissertation contributes to all three of these key areas. On matters of theory, this study offers the three relevance paradigms as a way to ground LRC research in a set of principles that organize the complex and dynamic set of language centers. As for a shared set of questions, this study introduces the topics of relevance, form, and function as constructs that demand further attention as the conversion from lab to center continues to unfold in the 21st century. And lastly, with respect to dissemination, this dissertation stands quite alone in its genre as recent doctoral dissertations on LRCs are all but non-existent. To advance this area of research, theory-based findings must be sought out regarding these dynamic institutions and results of these explorations need to be published in relevant venues.

Implications for those Affiliated with LRCs

The second implication of this study is rooted in more practical matters. In Chapter 2, I outlined the ebb and flow of relevance exhibited by past laboratories and centers. In my review of the literature, I was able to see for myself how the relevance of language centers seemed to increase or decrease depending on the dominant technological and methodological context at the time. What the history of language labs and centers shows is that the issue of relevance has weighed heavily on the minds of those affiliated with these institutions since the early days of their inception. The five LRCs highlighted in this study were not exempt from these concerns. And so, this second set of implications is directed to those either directly or indirectly affiliated with a language center and who, like many others, worry about the idea of relevance in the rapidly changing landscape of foreign language education.

This issue of relevance made up the very core of this study. Admittedly, this central focus emerged almost organically as the project unfolded. Based on my review of the literature, and drawing on my conversations with various LRC representatives, I began to develop a strong sense that much concern was devoted to this notion of relevance. To this point, I offer the three relevance paradigms as a framework that helps to address these concerns. These implications are presented as recommendations for two specific constituencies: 1) Those situated internally within a language center whose leadership and guidance directly impact the future forms and functions of their center and 2) Those situated externally to the LRC who may find themselves in any variety of important roles, including, but not limited to, evaluator, collaborator, and/or investor.

For both of these constituencies, the emergence of the three relevance paradigms, as well as the more general understanding of relevance as a dynamic continuum, should be of particular interest. For those situated within an LRC, these findings provide an explanatory framework for the justification of new and existing operations. As traditional functions are refitted to keep pace with constantly changing contexts, LRC personnel can weigh the impact of these decisions with respect to the department, institution, and community contexts. As this dissertation has demonstrated, not all functions result in an equal amount of relevance for all three of these paradigms. In fact, in some cases, a function that might be particularly relevant for one context might result in a decrease in overall relevance within another paradigm. It is clear that this interplay between paradigms warrants even further attention in the research.

As for those situated externally to a language center, this informed understanding of relevance is of similar importance. Although the findings here do not provide a step-by-step rubric or guideline for how to approach these complex institutions, the paradigms provide a way to talk about relevance in relatable and transparent ways. This broader framework can be used in conjunction with other more detailed guidelines like IALLT's recently published *Language Center Evaluation Toolkit* (Simon et al., 2017) which does, in fact, provide a much richer set of tools for both the internal and external evaluation of language centers. However, as I suggested above, not all external players assume the role of evaluators. Some approach the LRC as potential collaborators and others are in roles which allow them to direct resources (financial and otherwise) toward language centers. For these individuals, understanding a center's relevance within each of these three paradigms can be crucial information. For collaborators, this understanding can help them understand the degree to which potential interests might be aligned. For investors, this framework can help to inform the allocation of resources toward initiatives that can be mutually beneficial. For however helpful these applications may be, my recommendation is that they be combined with other helpful tools and frameworks.

Limitations and Suggestions for Future Research

Limitations

As for limitations of this study, there are three in particular that need to be made explicit. In a sense, these limitations serve as additional implications for LRC researchers. By contrast, these implications take more of a cautionary form as opposed to the rather prescriptive ones mentioned in the sections above. The first of these limitations refers to the sample of language centers analyzed in this study.

Compared to other qualitative studies, the five centers included here are not necessarily cause for concern. Indeed, studies carried out within the qualitative vein of research tend to have small, often non-randomized samples. However, within this sample of five LRCs, I was only able to interview two representatives from each institution. Combined, these interviews totaled ten. Collectively, these ten interviews generated ample amounts of data from which to draw on for this study. But, carrying out more than two interviews at each center would have likely resulted in a more thorough understanding of each context.

The second important limitation of this study is also related to the topic of sample. In addition to matters of sample size, the actual characteristics of the sample need to be considered. In the planning stages of this study, I set out to identify a set of language resource centers that were relatively comparable in nature. By excluding potentially anomalous institutions, I hoped to strengthen my chances at being able to draw generalizable conclusions from the findings. This led to both positive and negative outcomes. The problem is that these centers represent only a few states in one specific region of the United States. Part of the reason for selecting these specific centers was to allow me to visit these locations given the scarce amount of resources I had available for this project. However, as a result, other comparable centers located in geographically and even culturally different regions were excluded because of these practical restraints. Ideally, this study would have involved centers from multiple regionally and culturally diverse areas.

The last limitation had to do with methodology. As I've already explained, my initial goal was to select language centers that I would be able to visit in person. In fact, the original shortlist of possible centers for this study only included those which I was able to visit in person. For various reasons, this shortlist began to get even shorter and I was left with only three centers that were within a day's driving distance to my location. Thus, in order to broaden the sample, the final two centers were included in this study despite my inability to visit them in person. Thus, although photographs, websites, and verbal descriptions of these centers helped to bridge the gap, I would have likely gained an even deeper understanding of these institutions had I been able to see them with my own eyes.

Future Research

The findings from this study suggest a number of possible directions for the future research of language resource centers. To begin, it is possible that other relevance paradigms exist beyond the three that were identified in this dissertation. Consequently, future studies might be developed to identify and explore these unknown paradigms. Along these same lines, future studies might focus on just one of the relevance paradigms mentioned in this study. For example, LRC researchers might consider the possibility of qualitatively analyzing a group of five to ten centers to assess their specific levels of relevance along the center/department continuum. Such studies might include interviews carried out with an equal representation of internal as well as external LRC affiliates. By working with LRCs within the same paradigm, researchers will likely have an easier time asking questions about the ways in which these centers are contributing (or failing to contribute) to the overall efforts of foreign language education as understood within their specific relevance paradigm.

A third possibility for future research related to relevance might be to analyze centers that have been discontinued or dissolved into other units. Former members of these centers could be asked about the various events that led to their center's ultimate demise and explore if there were any connections to these three paradigms of relevance. Of course, beyond the issue of relevance, there is much to be done in the area of LRC research. Issues pertaining to form and function need further attention than what this dissertation has provided. Other studies might investigate whether LRCs within a specific relevance paradigm share a common form or common set of functions. For example, researchers might analyze LRCs squarely situated within the center/department paradigm to explore how these centers help to offset limited instructional contact hours by serving as social spaces where students can gain additional experience with the target language. At the center/community level, studies might seek to distinguish between local, state, national, and even international communities and the impact of the LRC in each of these contexts. Finally, studies within the center/institution paradigm might explore how LRCs are helping to break down cultural and linguistic barriers at their respective institutions. It is clear that as LRCs continue to adapt to new technological and methodological environments, research involving these institutions must also endeavor to keep pace.

Conclusion

In conclusion, this study demonstrates that powerful insights can be gained through the implementation of rigorous research designs that rely on eclectic sets of standardized tools and processes to uncover and explore complex phenomena. The tension between practice and theory is an old one and the study of language resource centers is not exempt from this friction. Some lean heavily on theory with little or no concern for the practical outcomes. Others cling to the comfort and practicality of praxis and give little heed or attention to theory. Language resource centers, as service-oriented institutions, have tended to gravitate towards practical rather than theoretical matters. However, as surrounding contexts continue to shift and change, language resource centers will have the best chances of survival as they ground themselves in praxis-informed theory in their efforts to carry out and facilitate theoretically informed praxis. This dissertation offers an example for how the two can come together to facilitate a relatively harmonious pursuit of deeper knowledge. Specifically, this study’s findings regarding form, function, and relevance demonstrate the kind of new knowledge that can be generated through such dynamic approaches to research.

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APPENDIX A

Interview Protocol

Background

1. Please tell me about your role with the center and how you came to be associated with it.
    a. Is your position considered faculty or staff, full-time or part-time? If faculty, is your position tenure-track?

2. How long has your center been in operation?

Organization

3. How is the center organized with respect to staffing, administration, and oversight?

4. Is the center housed within a specific department or college?

5. How is the center funded?

    a. Does the center receive external funding?

    b. Does the center generate any internal revenue/funding? If so, are these funds used exclusively for the center or are they used for other purposes?

Function

6. What would you say is the overall mission or purpose of the center?

7. What would you consider to be the main functions of the center?

8. Apart from these primary functions, what other services are provided by the center?

9. Does the center play a role in preservice and/or inservice teacher professional development? **Preservice refers to future language teachers (students) and inservice refers to current language teachers (faculty or TAs)*

10. In what ways does the center facilitate computer assisted language learning and computer assisted language teaching, if at all?

    c. Some centers work directly with language faculty to develop digital materials for their classes. Others assist students in their use of various language learning software programs like Mango Languages and Duolingo. Do you participate in any of these activities or other similar ones?

11. In your opinion, in what ways is the center similar or different from other language resource centers today? This could be with respect to either function or organization or both.

Relevance

12. Many language laboratories have been phased out due to the increase in ubiquitous, affordable, and mobile technologies. How has the center here maintained relevance in today's technological climate?

13. If the center were closed, are there responsibilities and/or services currently provided that could be taken over by other departments? What might the pros and cons be for breaking up these functions and asking other departments to fulfill them?

14. If you had unlimited funding and absolute decision-making freedom, what would you change about the center here?

APPENDIX B

Institutional Review Board Protocol

This research was conducted under approval from the Institutional Review Board at Boise State University, protocol #108-SB17-097.