Incorporating Linguistic Analysis and Processes into English as a Second Language Instruction

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Incorporating Linguistic Analysis and Processes into English as a Second Language Instruction

by

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A capstone thesis submitted in partial fulfillment of the requirements for the degree of

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CHAPTER ONE

Introduction and Research Question

Overview

English Language Learners (hereafter referred to as ELLs) face the dual challenges of trying to develop their English language abilities while simultaneously obtaining subject/content knowledge in the mainstream classroom. The development of English language abilities, which include the four domains of reading, writing, listening, and speaking, is vital for students who are either in learning contexts where they spend hours a day in English-only mainstream classrooms or for those who are preparing to do so. From my professional experience, regardless of their learning circumstances, many students studying English need to develop a solid understanding of the English language as quickly as possible in order to succeed in the mainstream class and for their future success. This is especially true for academic language because, as stated by Wright (2010), while it can take up to two to four years to develop social language skills, it can take up to five to eight years for academic language proficiency to be acquired (p. 41). It is the aim of this research question and capstone project to create a professional development resource for teachers to support them in using processes and best practices recommended to create a supportive environment for developing academic language. The long term goals for this capstone beyond this initial paper include methodologies and best practices that could also potentially lead to a reduction of the time that is required to gain academic language.

The research question of this capstone project is: how can an online professional development resource and community for teachers support understanding of using Linguistic
Analysis and processes to deepen an educators understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)?

This capstone project seeks to provide English as a Second Language (hereafter referred to as ESL) teachers with a resource related to how different processes involving Linguistic Analysis can be integrated into lesson planning in order to provide better instruction. The primary objective of integrating Linguistic Analysis is to inform how grammar and vocabulary are taught by focusing on differences and correlations between an L1 and L2 in order to provide more effective instruction. The term L1 is defined as the first language and L2 is the second language. At this stage in the research, Linguistic Analysis is narrowly defined as the morphological and syntactic comparison of languages.

This capstone is going to be addressing students who are in two separate learning environments. The first environment is a general school setting found within the United States public school system. In this setting, ESL teachers encounter teaching situations where multiple L1s are present with a variety of different formal educational backgrounds. These teachers may also need to provide instruction to groups of students with varied English Language proficiency levels. Within this school system, a wide variety of different methods from sheltered instruction to push-in/pull-out, are employed to teach the English Language while the students then often attend content courses within an English language mainstream classroom.

The second environment is an international school setting in a non-English speaking country. In this setting students generally attend mainstream classes in their native language and then take additional English classes, often with the intent to attend English language high schools or universities. Regardless of which environment a teacher is working in, it has been my
experience that there exists a pressure to develop student’s English proficiency as quickly as possible. These two environments are being discussed due to my background teaching experience within both settings along with the future potential of my working situation.

It is important to note that this capstone project is not focusing on using the student’s L1 during instruction as translations during grammar and vocabulary instruction but instead using comparisons between the L1 and L2 as an informer on how instruction might occur. A major component of this capstone project is to create a professional development resource that will support ESL teachers (who do not speak and may have little understanding of their student’s L1) in using Linguistic Analysis. This professional development resource will act as a tool to help teachers gain knowledge of their students’ language in order to inform how they teach their students English Language. Finally, while this research question could be applicable to any language being taught and potentially to different contents, this paper will be focusing on instruction of the English Language.

This chapter will focus on introducing the researcher’s background, interest, and experience along with the rationale for this research question. The first section of this chapter will trace the previously mentioned areas in order to establish the writer’s perspective and to discuss the researcher’s worldview. This section will also explore the development of this research question to provide a context for the problems behind the research question. The second section of this chapter will delve into the rationale behind this research question in order to provide a framework. This section will also further introduce the problems with the different identified teaching situations to highlight the importance of the question.
**Researcher Background**

My background, both professional and personal, has shaped the development of the research question of this capstone project. This section will explore the development of this research question by detailing how my professional and personal experiences have influenced the decision to explore this topic. A discussion regarding the connections between my own personal language learning experiences, ESL instructional background, and teaching experience regarding will be provided to illustrate the development of this topic.

During my life, I have had several opportunities to study a variety of different languages including Spanish, American Sign Language, Mandarin Chinese, and Kazakh. While eager and often very invested in learning the language, due to being immersed by residing within the country of the language's origin (Kazakh and Mandarin Chinese), I have often struggled to develop strong proficiency levels in a foreign language. While the development of vocabulary has generally been easy, a struggle has existed when it came to the production of comprehensible output that did not contain grammar that was not influenced by L1 (English Language) negative transfer. As a student, I often tried to connect the English grammar and vocabulary to that of the L2 being studied, in order to better understand how the latter was constructed through the differences and correlations. While the differences and correlations between the vocabulary were generally easier to be discovered without the aid of an instructor, it was a struggle to do that with grammar. This resulted in instances of frustration that might have delayed my understanding of the targeted language feature.

I recall on several occasions asking my language teachers to explain differences in the constructions and to even provide more information about my L1 grammatical structure but was
always told to focus on the L2. My research for the literature review for this capstone emphasized to me how this desire to know the “why” was not restricted to just me. Holland (2013) discusses how, in her teaching experience, she found students wanted to learn more than just how to speak English but also the “why” surrounding the grammar points construction along with pronunciation (p. 139). Since learning more about Linguistic Analysis, I have begun to include discussions about the differences between languages along with more in depth descriptions focused on answering why the language is constructed in such a manner. Feedback from students have indicated that this two-prong focus has been positively received and they feel it has benefited their learning.

As my development as a teacher grew, through experience and studies, I realized that my language struggles were also due to the primarily intuitive nature and not formal understanding of English grammatical construct coupled with a lack of understanding of linguistics. After this realization, I pondered if my own language learning experiences would have been more successful if explicit instruction involving connections to my L1 had occurred. This realization, which came to fruition during my graduate studies, ultimately begin at the start of my career as an ESL teacher which began as a Peace Corps Volunteer.

My introduction to ESL teaching started in March of 2011, upon joining the Peace Corps as an Educational volunteer and beginning teaching the English Language in a small village school in Kulan, Kazakhstan. The teaching occurred in a fairly monolingual environment (Kazakh and a few Russian Native Speakers (NS)) and in a co-teaching situation. The Kazakh language was often incorporated into the classroom during instruction to provide support either through describing vocabulary or the grammatical system. In addition to discussing the grammar
system, my co-teachers would often explain the differences between the language grammar rules in Kazakh to the students.

After completing my Peace Corps service, I later sought and obtained a Teaching English as a Foreign Language (TEFL) certificate in the spring of 2013 through Hamline University in St. Paul, MN and then continued teaching by joining the faculty at Jiliang University in Hangzhou, China. The fall of 2014 saw a return to Hamline University to obtain a Minnesota ESL K-12 teaching license. During this time, courses on second language acquisition (SLA) and linguistics, helped to improve my understanding regarding best practices concerning ESL instruction. These courses continued to facilitate my growing interest surrounding the topic of the research question for this capstone. In the spring of 2018, I returned to Hamline University to complete my Master of Arts in Teaching English to Speakers of Other Languages (MA TESOL), taking additional courses, of which one was on advanced linguistics.

All of the information gained and experiences came to a culmination during the advanced linguistics course when I learned about Linguistic Analysis which is a process that seeks to determine the lexical, grammatical, and pragmatic functions of language (Erku, 2018, lesson 2 slide 2). In this course the professor had the students find solutions using data samples from different languages and comparing them on a morphological and syntactic level. After completing the comparison we were asked to consider the implications of our solutions on how we viewed our instruction. While completing this assignment, I found myself once again reflecting upon my previously mentioned language learning experiences and considering how this might have benefited my learning. This piqued my interest to learn more about how Linguistic Analysis and its processes could be used as a tool to inform instruction. As my
understanding of the topic grew, I gained the ability to articulate a clear rationale for doing this project along with the potential impact for a variety of stakeholders.

The Rationale for Doing the Project and Stakeholders

This section is going to detail the rationale behind this project along with a discussion regarding the stakeholders that could be impacted due to this research question. The rationale behind this research question revolves around a single concept; to utilize more efficient instruction methods to create a more supportive environment for English language development that might lead increase students English language proficiency at a quicker rate so that ELLs can succeed in a mainstream content classroom taught in English or within English speaking environments.

According to Jenkins (2012), the English language has been used as a lingua franca between speakers with different L1’s for centuries (p. 486). The English language has continued to gain worldwide usage to communicate in a variety of different situations including politics, business, science, and even tourism. From my experience as an ESL Teacher, learning the English language has become a vital component for both students and adults and their future aspirations, especially for individuals who are living in (or intending to) and planning to remain in English speaking environments. There is, therefore, a great deal of pressure to have students develop their English language abilities quickly in order to support their overall academic achievement and future aspirations. This pressure to build up English learners proficiency is a major component behind the rationale of this research question.

According to Cummins (2007) Cook (2001) states that,“Recent methods do not so much forbid the L1 as ignore its existence altogether [...] the only times the L1 is mentioned is when
advice is given on how to minimize its use.” (p. 223). In addition, Cummins (2007) further states, that educational policies are dominated by unsupported monolingual instructional principles that have been adopted as essentially “common sense”. (p. 222 & 224). From my professional experience, in both international educational setting and a U.S. setting, ESL teachers generally provide all of their language instructions in English. There are a wide variety of techniques, teaching strategies, and tools that can be used that assist ESL teachers to instruct only in English. While immersion in a language can be beneficial, my graduate experience and own immersive language experience suggests that it might be possible that with a more supportive language learning environment a student’s English language proficiency might occur quicker if they are instructed in a manner that is informed with knowledge about the L1. This is particularly vital for students within educational systems where the content is being taught in the English language.

Based on my professional experience, for ESL teachers within the US public schools, the ultimate goal of their instruction is generally to prepare students for the mainstream classroom. In addition to the ESL teachers, there are several additional stakeholders involved in this research topic. The primary stakeholders are the students themselves. While social language ability can only take two to four years to develop, academic language ability can take up to five to eight years (Wright, 2010, p. 41). During this time students do not have full access to the content material in the mainstream classroom, which can lead them to underperform academically and lead to an achievement gap. For example, the Minnesota Report Card from August 2018 illustrates the discrepancy that exists between ELLs graduation rate when compared to native English language speakers.
According to the Minnesota Report card, 64.7 percent of English learners graduate from high school within four years with 18.9 percent become continuing students while 9.3 percent drop out (English Learners in Minnesota Report, 2018, p. 25-26). In comparison, 84.2 percent of non-EL (English Learners) students graduate from high school within four years with only 7.9 percent engaging in continuing education and 4.3 percent dropping out. While the report does not draw any correlating conclusions between the student's English language proficiency levels it can be considered to play a role in the graduation rate. Due to these statistics, any methods or tools that could assist students to develop their English language abilities should be researched and considered. While the Minnesota report card presents a picture of the ELLs within our schools and supports teachers in understanding the vital needs of these students’ teachers, including myself, also need resources and tools to help their ELLs succeed.

As a teacher, I see my ultimate duty as helping my students learn and grow as an individual so that they can succeed in the world beyond the classroom. Often I have seen ELLs struggle within mainstream classrooms to achieve success with the content material due to low English language proficiency levels. Using Linguistic Analysis and the processes that will be discussed in Chapter Two could help to inform instruction so that ELLs success will no longer be hindered due to their language proficiency level.

Summary

My teaching background is filled with a variety of different teaching situations that have helped me realize that due to the complex nature of teaching students from a wide variety of different language backgrounds ESL teachers, out of necessity, do not often take students’ L1 into consideration. I have experienced this in both a monolingual classroom and in a
linguistically diverse setting. As an ESL teacher, I have only had knowledge of my students' L1 when instructing students from Mandarin Chinese and Kazakh backgrounds and this knowledge has ranged from basic to intermediate. This means that I was often unable to provide any support to my students in their L1 or to explain differences between the languages to my students. Prior to taking Advanced Linguistics, I had not previously encountered Linguistic Analysis and was not aware that there are processes that can be utilized to compare a students’ L1 to English that could inform instruction without the teacher having knowledge of the first language. This is a tool, that if utilized correctly, might provide ESL teachers with information that could assist them in helping their students develop their English language proficiency.

Capstone Overview

In this paper, my focus is to share with teachers how Linguistic Analysis can be effectively and practically used by ESL teachers to inform how they teach grammar and vocabulary. This capstone contains four sections, the first of which has been Chapter One, the introduction. Chapter Two involves the literature review which will provide an overview of the literature relevant to the research question. This relevant literature will include the following subtopics; Second Language Acquisition theories, Linguistic Analysis, and identified processes, and utilizing Linguistic Analysis to inform teaching methods. The third chapter will involve a detailed discussion regarding the project connected to this project including a description of the project, the targeted audience, and the research that supports the development of the project. The fourth and final chapter will be a reflection on what has been learned during the research surrounding the research question and the construction of the project. This chapter will also explore the potential implications of this project along with its limitations and benefits.
CHAPTER TWO

Review of the Research Literature

Introduction

This literature review is focusing on the research question: how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator's understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)? The review of the literature to explore this research question, and what is learned will be used in the construction of a professional development resource (in the form of a website) of best practices and processes connected to Linguistic Analysis to be used to inform teaching methods. The goal of the development of this professional development resource is to provide more effective instruction for the development of English Language Learners (ELLs) English language proficiency. This is in order for them to be successful with the curriculum found within the mainstream classroom or in an English language work or living environment.

The topics that will be addressed in this literature review are the following: First Language (L1) and Second Language Acquisition (SLA); and Linguistic Analysis including Contrastive Analysis Hypothesis (CAH), Error Analysis (EA), and Systemic Functional Linguistics (SFL). This literature review will end with a discussion on incorporating Linguistic Analysis into instruction. These topics have been identified by researching authors such as Susan Gass and others determined to be relevant and connected to the research question.

The first topic of the literature review will focus on SLA and the role that the L1 plays in its development. According to Romero and Manjarres, among others, the first language (L1)
influences the learning of a second language (L2) by being, “a source for the learner to understand how the language works when the first language and the foreign language are similar (transfer), or by being a factor of interference if the two languages are very different (negative transfer)” (Romero & Manjarres, 2017, p. 124). This section will provide a foundation for understanding how languages are acquired by discussing major theories of L1 and SLA and will be divided into two parts. The first part will define and briefly discuss the theories connected to SLA. The second part will discuss the role that ELL’s L1 may have on SLA through transference. The aim of this section is to connect the role that the L1 plays in the development of the L2, in order to illustrate why the L1 should be considered when developing instruction.

The second topic of this literature review will focus on the main research area, Linguistic Analysis. For the purposes of this capstone, Linguistic Analysis is used as the umbrella term for the processes of Contrastive Analysis (CA), Error Analysis (EA), and Systemic Functional Linguistics (SFL). This section will be divided into two parts. The first part will delve into an explanation of Linguistic Analysis, focusing on how Contrastive Analysis (CA), Error Analysis (EA), and Systemic Functional Linguistics (SFL) can be utilized to better understand language and enhance instruction. The second part will discuss controversies surrounding the field such as the ability of analysis in predicting errors in order to provide a greater picture and understanding of the topic. The overall aim of this section is to introduce Linguistic Analysis to the reader and provide the foundation needed to understand how Linguistic Analysis could be utilized in instruction.

The third and final section of the literature review will delve into incorporating Linguistic Analysis into ESL instructional methods. Cummins (2007) argues that a rethinking of
monolingual instructional strategies needs to occur to better serve multilingual students. He states that, “When students’ L1 is invoked as a cognitive and linguistic resource through bilingual instructional strategies, it can function as a stepping stone to scaffold more accomplished performance in the L2” (p. 238). Therefore, this section will focus on how Linguistic Analysis and the additional processes can be used as a stepping stone to provide additional scaffolding to improve student performance in the L2.

The third section of this chapter will be divided into three subsections in order to facilitate the discussion on incorporating Linguistic Analysis into instruction. The first part will discuss the findings of case studies involving the application of Linguistic Analysis and the processes in instruction. The second part will review how Linguistic Analysis can be incorporated into instructional methods. The third part will discuss potential challenges involved in using Linguistic Analysis that might deter teachers from utilizing the processes. The intent of this final subsection is to tie together the previous two sections and discuss how Linguistic Analysis can be used as a tool to inform instruction in order to provide better scaffolding to assist students in the development of their L2.

**First Language and Second Language Acquisition**

This discussion will begin by exploring how to improve teaching the English language by considering how languages are acquired as well as the interaction between the L2 and the L1 during acquisition. Through a solid understanding of these concepts, better instructional methods that support learning can be developed. A solid foundation of these concepts also provides rationale for the use of Linguistic Analysis and processes along with the development of a website designed as a professional development (PD). This section will begin by giving a brief
overview of Second Language Acquisition (SLA) along with select approaches that have been identified as being connected to the research question. The approaches that will be discussed include Universal Grammar (UG) and two additional components: Fundamental Difference Hypothesis (FDH) and Access to UG Hypothesis. After discussing these theories, this section will continue by examining the role that a learner’s first language plays in the acquisition of an additional language by discussing the theories of interlanguage and transfer.

**Second Language Acquisition: Universal Grammar (UG).** Second Language Acquisition (SLA) is the study of how languages are learned after the development of the first language (L1). It focuses on how languages are developed, in particular, the acquisition of the rules surrounding the second language. Additionally, Gass, Selinker, & Behney (2013) notes SLA involves what is and is not acquired and the failure of the majority of individuals in developing a similar proficiency in additional languages as in a native language (p. 1). This section will be examining the Universal Grammar (UG) approach, which Noam Chomsky defined as, “a sort of template, containing the principles that are universal to all human languages” (Lightbown & Spada, 2013, p. 20), to SLA. In addition to the previous discussion, this section will also discuss how the two topics are connected to the research questions along with the Fundamental Difference Hypothesis (FDH) and Access to UG Hypothesis. These specific approaches have been identified during my review of the research literature for this capstone. During the review of the research literature, UG was identified as particularly important as it is connected to Linguistic Analysis. This literature review will not go into depth about these approaches but will give a brief background and then explore how they are connected to the research question.
According to Gass et al. (2013), the UG theory holds that there are mental universal principles that govern language and its meaning (p. 161). Gass et al. (2013) continues by stating that at the heart of this theory is the concept that all languages have a core set of grammar rules created by abstract principles and varying language parameters (p. 161). Under the UG approach, Gass et al. (2013) states that in first language (L1) acquisition there exists:

[An] innate language facility that limits the extent to which languages can vary. That is, it specifies the limits of a possible language. The task for learning is greatly reduced if one is equipped with an innate mechanism that constrains possible grammar formation. (p. 161)

In relation to SLA, the UG approach focuses on the question of the individual's ability access to UG “template” (Gass, Selinker, & Behney, 2013, p. 163). The Hypothesis connected to how individuals access UG include Fundamental Difference Hypothesis (FDH) and Access to UG Hypothesis. Each of these hypotheses address how a language learner might access UG “template” while they are learning an L2.

FDH states that language acquisition for a child is different than an adult’s because unlike children, adult L2 learners have knowledge of a full linguistic system (Gass, et al. 2013, p. 164). As stated by Gass et al., FDH takes UG into consideration but also views UG as only being accessible through the L1 and is therefore not available to older L2 learners. Learners instead then use their knowledge of their L1 to construct a pseudo-UG (Gass, et al. 2013, p. 165). If UG is operative only through the L1, as suggested by FDH, then the expectation would be that only L1 features would develop in the L2 (Gass, et al. 2013, p. 171).
According to Gass et al. (2013), Access to UG Hypothesis is an opposing view to the Fundamental Difference Hypothesis (FDH). Instead of viewing UG as only accessible to a learner in their L1, it instead considers the UG “template” to be separate and unchanged by the L1 acquisition. Instead, UG then plays a role in the L2 learner’s interlanguage grammar (Gass, et al. 2013, p. 165). White (as cited in Gass, et al. 2013) states that the initial state of L2 learning takes either the L1 or the UG as the start. There are several different hypotheses that present arguments for the roles of the L1 and UG in L2 acquisition. The first two hypotheses discussed view L1 as being the base for SLA. The Full transfer/Full Access Hypothesis argues that a learner starts with their L1 grammar and retain it as a base, but during acquisition, they have access to the UG when the L1 is insufficient.

**Role of L1 in Second Language Acquisition.** According to Whong-Barr (as cited in Grami & Alzughaibi, 2012), the role of the L1 in influencing the development of the L2 needs to be researched because of the data that support the existence of that influence (p. 1553). This section starts by discussing historically how L1 influence could be influencing SLA, and it will also explore the theories surrounding interlanguage and transfer and their arguments regarding the influence of L1 on the SLA. These two theories have been identified as having a connection to the research question and with Linguistic Analysis.

The history of research related to the role of the L1 in SLA is varied and filled with controversies that come with the changing and developing approaches to the field. One ever-evolving theory is interlanguage which was a term coined by Larry Selinker (as cited by Lightbrown & Spada, 2013, p. 43) to describe a learner’s developing second language knowledge. Lightbrown and Spada (2013, p. 43) describe how interlanguage is constructed and
influenced by languages that have been previously learned as well as by the current language being learned. These authors also note that interlanguage is dynamic, ever-evolving, and based on responses gained as the learner tests their hypothesis of the second language (Lightbrown & Spada, 2013, p. 43).

For example, imagine a scale that goes from 100% L1 to 100% L2. A newly developing interlanguage will more closely align with the L1 on the scale than the L2. Then, as the ELL continues to learn and develop their English Language proficiency, their interlanguage begins to move along the scale away from the L1 and towards the L2. Eventually, the interlanguage will begin to take on a more familiar construct to the L2 until it resembles the L2 more than the L1. A study conducted by Alice Y. W. Chan (2004) led her to conclude that while ELLs may use their knowledge of the L2 to determine if the interlanguage they produced is accurate, they more often relied on their L1 (p. 66).

Along with interlanguage, the transfer theory also details the role of the L1 in the SLA. The transfer theory was developed by Lado (as cited by Gass, 1984) and sought to explain the L1 role in SLA by hypothesizing that a person’s L1 could influence their developing L2 through the transference of elements from their L1 to the construction of the L2 (p. 115). Gass (1984) also adds that during the development of the theory it became apparent that while there are instances where the transfer occurs, transfer was not the only force determining the construction of a L2 (p 116). According to Romero and Manjarres (2017, p. 124) transfer theory describes two categories of transfer where the L1 acts as a source in the construction of the L2 output. The first is positive transfer, where the element that the learner is transferring from their L1 is similar to the L2 and therefore does not cause errors to be produced. Negative transfer is when the
information be transferred from the L1 is interfering, leading to errors to occur in the construction of the L2 due to the differences between the L1 and the L2.

The theories of interlanguage and transfer are important in this discussion because as Romero and Manjarres (2017) state, a learner’s L1 is the first source of language comprehension that language learners have and that they resort to making connections to the L2 using their L1 schemas (p. 123). During Second Language Acquisition (SLA), Universal Grammar (UG) plays an important role in SLA as previously discussed. In addition, UG plays a role in transference and interlanguage. Furthermore, Cummins (2007) states that:

If students’ prior knowledge is encoded in their L1, then their L1 is clearly relevant to their learning even when instruction is through the medium of L2. The second theoretical perspective highlights the interdependence of literacy-related skills and knowledge across languages and the fact that cross-lingual transfer is occurring as a normal process of bilingual development. Rather than leaving this process to unfold in a potentially sporadic and haphazard manner, it seems reasonable to teach for two-way cross-lingual transfer (L1 to L2, L2 to L1) in order to render the process as effective as possible. (p. 231)

Cummins (2007) comment illustrates very well the importance of the L1 in SLA and why it needs to be taken into consideration when designing instruction. While this section has focused on discussing theories that would illustrate why ESL teachers should incorporate the L1 into
This discussion regarding Second Language Acquisition (SLA) and the role of the L1 has laid a foundation for the following discussion involving Linguistic Analysis and the three processes, Contrastive Analysis Hypothesis (CAH), Error Analysis (EA), and Systemic Functional Linguistics (SFL). This foundation has been laid due to the connection between the preceding topics and the aforementioned following ones. For example, according to Gass et al. (1984), language transfer was the basis for the development of CAH (p. 115). Supporting Gass et al. (1984) is James (1994), who calls transfer the “cornerstone” of classical CAH (p. 181). In addition, Freire and Kunzel (1984) state that experienced foreign language teachers know that many errors are caused by L1 influence otherwise referred to as interference or transfer (p. 159). In the following section, the connection between these theories and Linguistic Analysis will be further drawn out.

**Linguistic Analysis and Processes**

Lightbown and Spada (2013) state that educators are unable to read their students’ minds and must instead make inferences about student knowledge through observations. They continue by arguing:

Like those who study first language acquisition, we observe learners’ spontaneous language use, but we design procedures that help to reveal more about the knowledge underlying their observable use of language. Without these
procedures, it is often difficult to determine whether a particular behaviour is representative of something systematic in a learner’s current language knowledge or simply an isolated item, learned as a chunk. (p. 41)

This capstone’s research question revolves around the notion that Linguistic Analysis along with CA, EA, and SFL can be used to help develop more effective ESL instruction. This section will include a discussion about Linguistic Analysis and three processes: Contrastive Analysis Hypothesis (CAH), Error Analysis (EA), and Systemic Functional Linguistics (SFL). These three approaches or processes have been selected, after the research was conducted, as being relevant to the research question: how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator’s understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)? For example, a case study conducted by Romero and Manjarres (2017) resulted in them suggesting that CAH and EA provide can provide an understanding of how a L1 can influence the learning of an L2 (p. 1). The discussion about CAH, EA, and SFL will include an overview of the topics including history, usage, and controversies.

Linguistic Analysis. According to Friede Erku, “In linguistic analysis, we attempt to determine the relationships between linguistic forms and their functions, with an eye towards defining linguistic universals-common properties that languages share, which Tallerman (2015, p. 12) defines as ‘homogeneity or sameness’” (Erku, 2018, lesson 1 slide 8). Furthermore,
Linguistic Analysis seeks to identify both lexical and grammatical functions (Feride, 2018, lesson 1 slide 8) slide 11. Overall, Linguistic Analysis seeks to determine the lexical, grammatical, and pragmatic functions of language (Erku, 2018, lesson 2 slide 2).

Linguistic Analysis involves the examination of language on the linguistic level. According to Frascarelli and Puglielli (2001),

A fruitful analysis should rely on the observation and systematic description of linguistic data in order to provide explanatory hypotheses. These hypotheses should enable the researcher to relate the various phenomena to a finite (and limited) number of principles, and to make predictions about parts of the system which have not yet been observed. (p. 6)

An analysis can be conducted on various levels included phonology, morphology, syntax, semantics, and pragmatics (Frascarelli & Puglielli, 2001, p. 5). In this capstone paper and project, Maggie Tallerman’s framework laid out in her text *Understanding Syntax*, which focuses on the morphological (morphology) and syntactic (Syntax) level has been adopted.

Morphology focuses on the study of how words are formed using distinct meaning bearing units. In addition, Razfar and Rumenapp (2014) state that Morphology involves, "the study of a language's morphemes and the rules governing its transformations for communicative purposes" (p. 112). Morphemes are the smallest meaning bearing part of language. For example, suffixes like -ed or prefixes like re- are morphemes that contain meaning and are affixed to root/base words (Razfar & Rumenapp, 2014, p. 114). Syntax involves how sentences are
constructed through the grouping of words together to form phrases and sentences (Tallerman, 2015, p. 1). The following section presents a further discussion regarding the Linguistic Analysis framework approach that has been taken in this capstone along with a review of the morphological and syntactical analysis.

**Theory-free Framework.** Linguistic Analysis has many different theory-based frameworks in which how an analysis is conducted and reviewed is determined (Heine, Narrog, & Booij, 2012). This capstone paper and project has adopted a descriptive, theory-free framework approach to Linguistic Analysis instead of a theory-based framework such as Construction Grammar (Fried & Ostman, 2004) or Cognitive Grammar (Heine, Narrog, & Booij, 2012). This paper and project will instead adopt and integrate a descriptive approach based on the work done by Tallerman (2015) and Payne (2006). This descriptive approach involves a morphological and syntactic level of analysis that includes the categorization and ordering of morphemes and a discussion of syntactic rules in a non-theory specific notational system (Erku, personal communication, October 31st, 2019).

This descriptive approach, as previously mentioned, is based on Tallerman’s work (2015) and derived from Linguistic Analysis assignments constructed by Hamline University’s Professor Feride Erku, which were also based on Tallerman (2015). From a review of Tallerman and Erku’s assignments this descriptive analysis approach can be divided into three steps. The first step is considered with an analysis on a morphological level. This step involves the construction of a lexicon that lists all the morphemes (morpheme segmentation) and root words. The lexicon is categorized and sub-categorized into groups such as nouns and verbs, and
endings. According to Erku, the basic rule of the lexicon is one morpheme, one meaning (Erku, personal communication, November 4, 2019).

The second step focuses more on a syntactic level of analysis and involves taking into consideration the elements, essentially determining how they are ordered, related, and agreements between them. This step is analyzing for syntactic rules and generalizations that could be made. This step can include generating and answering questions regarding the language features. The third and final step is to consider other syntactic rules by constructing and asking questions regarding the language features that appear in the example. Each of these steps can give the individual conducting the Linguistic Analysis a better understanding of the similarities and differences between the two languages. Connected to Linguistic Analysis are three additional processes that through the review of literature have been identified as being relevant to this research question. These additional processes include Contrastive Analysis Hypothesis (CAH), Error Analysis (EA), and Systemic Functional Linguistics (SFL)

**Contrastive Analysis Hypothesis (CAH).** Contrastive Analysis Hypothesis (CAH), according to Johnson (as cited in Romero & Manjarres, 2017), is the detailed structural comparison of languages in order to determine their similarities and differences (p. 124). The comparison, according to Gass et al. (2013, p. 86), can occur on the morphological and syntactic level and the sound system. The importance of CAH is noted by Romero and Manjarres (2017) who state how it allows the teacher to understand the differences and similarities between two languages in order to correct the negative transfer (interference) coming from the L1 (p. 124).
CAH was derived from a behaviorist background and was first advocated for by Charles Fries and Robert Lado in the 1940s and 1950s (as cited in Jimenez, 2005, p. 242).

According to Jimenez (2005), Fries and Lado asserted that different categories of the L1 influenced the L2 because of the involvement of the transferring of L1 habits to the L2 (p. 242). This viewpoint then shaped the development of CAH, which promotes the comparison of two languages in order to identify and predict difficulties and errors that language learners may encounter (Jimenez, 2005, p. 242). Often CAH seeks to find distinctions in the L2 that are not present in the L1 (Hadlich, 1965, p. 426).

Within CAH there are two positions: the strong (a priori) and the weak (posteriori) versions. The strong version holds that predictions about a learner’s ability to learn language features can be constructed by comparing the two languages. This version also argues that the success of the materials being used to teach can also be determined through a comparison between languages (Lightbrown & Spada, 2013, p. 98). The strong version of CAH is considered, according to Ronald Wardhaugh (1970), to be “unrealistic and impracticable” (p. 124). The weak version analyzes the recurring errors that a learner makes in their output due to interference (Wardhaugh, 1970, p. 123). Lightbrown and Spada (2013) state that the weak version takes what the learners do compares it to how it is different from the L2 to account for the errors (p. 98). Eventually, the weak version gained credence over the strong view and was later incorporated into the development of EA (Gass, et al. 2013, p. 87).
In any discussion involving CAH, it is vital to acknowledge there are controversies that surround the hypothesis. In its early days, CAH enjoyed widespread popularity but eventually fell out of favor in North America in the 1970s due to what was determined as inadequacies within the hypothesis. These inadequacies are described in the following quote by Dulay, Burt, and Krashen (as cited in Ching-Ying Lin & Shu-Yuan Chuang, 2014):

Inferred in their studies that there was a little advantage of administering error analysis which exploited the concept of negative transfer in second language learning. They held that native language interference constituted nothing but a tiny portion which caused errors in the output. Therefore, CA was regarded as being irrelevant to second language acquisition in North America at that time. (p. 100)

At the root of the criticism towards CAH are two concepts: the difficulty of learning, and its claim to predict errors (Gass, et al. 2013, p. 87). Cracks in CAH began to appear when researchers began to apply CAH and noticed that many of the errors that were being made were not being caused by negative transfer from the L1.

While it is unclear what causes these errors to occur, Jimenez (2005, p. 243) suggests it is generally considered to be intralingual errors. In addition to failing to explain why errors occurred, CAH’s notion that elements of language that were identified as being different and therefore difficult also disintegrated. Researchers found that many of the areas that CAH identified as being difficult were not accurate. Instead, there were language features that were considered ‘difficult’ according to CAH that the learners acquired easily. While past work has been done to discredit CAH, more recent work conducted by individuals, such as Kellerman and Smith and Oldin and James (as cited by Chan, 2004, p. 56), have updated and revitalized the
field. In addition to CAH, Error Analysis (EA) is another type of Linguistic Analysis that began to be developed in the 1970s in response to the failures and criticisms of the CAH.

**Error Analysis.** As with CAH, Error Analysis (EA) focuses on the errors that language learners produce. Yet, instead of making comparisons between the L1 and the L2 as CAH does, EA instead compares the L2 produced by the learner to the correct form of the L2. According to Lightbrown and Spada (2013), “Error Analysis provides a broader range of possible explanations than contrastive analysis for researchers/teachers to use to account for errors, as the latter only attributed errors to the NL” (p. 103). In EA, these authors describe how errors are seen as indicators of the learner’s knowledge and understanding of the L2 along with their attempts at developing their knowledge of the rules of the L2 system. Within the framework of EA, Lightbrown and Spada (2013, p. 103) also note how there are two main forms of errors: interlingual and intralingual errors. Interlingual errors are ones that can be considered to have been caused by the L1, while intralingual errors are due to issues not connected to the L1 that has developed. EA also faces criticism for its reliance on errors.

The criticism of EA due to its focus on errors is related to how this focus led to the exclusion of other information when considering the entirety of a learner’s understanding of the L2. Another difficulty with EA is the definition of what is an error and differentiating between errors of understanding versus mistakes. While these criticisms illustrate how EA only shows a partial picture of a learner’s developing conception/production of the L2, it is important, according to Lightbrown and Spada (2013), because EA highlighted “the recognition that learners were more than passive hiccupers of NL forms and functions” (p. 110). While different,
both EA and CAH, seek to identify on a syntactic and morphological level either potential challenges or causes for errors. The next processes that will be discussed, Systemic Functional Linguistics (SFL), moves to a different level of linguistics and concerns itself with the structure of writing.

**Systemic Functional Linguistics (SFL).** Systemic Functional Linguistics (SFL) is the comparison of the structure and organization of writings. SFL enables a description to be constructed regarding the functions of language within a given genre. Within SFL are metafunctions which are three functional dimensions. This method, according to Troyan and Kaplan (2015, p. 374), exposes how different genres express meaning. Through a comparison of the construct of a genre, instructors can develop an understanding of the elements that are utilized in order to better teach how to write. In addition, the important grammatical elements and vocabulary that are relevant to the genre can be identified.

This section has provided a detailed discussion about Linguistic Analysis and three connected processes, CA, EA, and SFL. During this section, a discussion has occurred regarding the foundations of Linguistic Analysis and the processes along with connected controversies. Overall, this discussion has illustrated how Linguistic Analysis and the processes are tools that can be used to gain linguistic knowledge about different languages without having to be proficient in one of the languages being compared.

The following section will involve a discussion about the incorporation of Linguistic Analysis and the three processes into instruction. Utilizing this information can be important to
an ELL’s proficiency development because according to Cummins (2007), “learning efficiencies can be achieved if teachers explicitly draw students’ attention to similarities and differences between their languages and reinforce effective learning strategies in a coordinated way across languages” (p. 233). This final section of the literature review will take what has been discussed in the previous sections and apply them to instruction.

**Incorporation into Instruction**

At the core of the research question; *how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator's understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)?* is how Linguistic Analysis can be used to inform the development of effective instruction. Cummins (2007) states that student’s language development and awareness benefit from instruction focusing on the similarities and differences between languages (p. 229). In addition, Cummins (2007) states that by invoking a student’s L1 as a “cognitive and linguistic resource” during instruction can act as a scaffold that could lead to better performance in the L2 (p. 238). Through the exploration of research connected to SLA in the first section, a picture of the importance of the L1 in SLA has been established while the second section discussed Linguistic Analysis along with CA, EA, and SFL. This third and final subsection of this section of the literature review will delve into the research involving how to use Linguistic Analysis to inform instruction and connect the previous two sections. The research that will be discussed will include case studies that support the use of
Linguistic Analysis along with methods of how to use the information gained by conducting Linguistic Analysis to inform instruction.

**Case Studies Involving Linguistic Analysis.** During the course of this literature review, several case studies involving the different forms of Linguistic Analysis were identified. This section is going to discuss several of the case studies that support the use of Linguistic Analysis to inform instruction methods. These case studies include Ronald Sheen’s (1996) examination of the effectiveness of a deductive approach utilizing information from CA, Lin and Chuan’s (2014) examination of instruction of relative clauses to Taiwanese EFLs, and Romero and Manjarres’ 2017 study.

Ronald Sheen published his article *The Advantages of Exploiting Contrastive Analysis in Teaching and Learning a Foreign Language* in 1996, which discussed his case study that examined the effectiveness of an inductive approach versus a deductive approach that incorporated CA input. The study, which included fifty Saudi Arabian civil students, was conducted over a forty-week intensive course and included giving the Experimental Group (EG) explanations, first in Arabic and later in English, regarding the differences between the Arabic and English languages (Sheen, 1996, pp. 6-7). Sheen (1996) stated that the findings of his case study “demonstrated that the treatment of the CA input in the deductive approach used with the EG has been more effective than the inductive approach in minimizing the error rate” (p. 192). In addition, Sheen (1996, p. 10) also states that a general conclusion that can be researched based on the test results is that the CA input in the EG resulted in more effective treatment.
Another case study that was examined was conducted by Romero and Manjarres (2017). While the case study discussed in their article was not specifically intended to test the effectiveness of CAH and EA it did explore how the L1 impacts the learning of an L2, and they did draw a conclusion regarding the two. They stated that CAH and EA facilitated the teacher’s understanding of the L1 interference and lead to the construction of more suitable lessons and activities (p. 135). The case studies have provided support for how Linguistic Analysis can lead to more effective instruction, and have also have reflected upon a student’s perception of being taught using these methods.

Lin and Chuan’s 2014 study, discussed in their article Taiwanese EFL Learners’ English Relative Clauses Learning, also examines utilizing CAH in instruction but unlike Sheen (1996), this study (Lin & Chuan, 2014) also focuses on the student’s perception of CAH instruction. In this study, the EG (referred to as the treatment group in the article), received the same material as the controlled groups but also received additional instruction that included explanations that had been informed using CAH (Lin & Chuan, 2014, p. 101). According to authors the students in this study were supportive of the use of a CAH approach because they felt that it had helped them to learn and would also like to continue to use it to learn English (Lin & Chuan, 2014, p. 1 & 7). This section has reviewed the purpose and processes of the highlighted case studies. The following section will discuss the methods that the case studies utilized when incorporating the information derived from the analysis into instruction.
Incorporating Linguistic Analysis into Instructional Methods. There are many methods of instruction that encourage connections between the L1 and the L2. These methods include the New Concurrent Method, Community Language Learning, and Dodson’s Bilingual Method (Halasa & Al-Manaseer, 2012, p. 73). Yet, each of these methods requires the teacher to have a strong understanding of the L1s within the classroom. This can become impractical and even problematic in teaching situations with more than one L1 present in the classroom. This could also create problems for students whose L1s are more uncommon. It is therefore important to consider how to provide instruction without relying on the usage of L1 by the teacher during instruction.

When incorporating Linguistic Analysis into instruction, the previously mentioned case studies generally used explanations that explicitly brought out the differences during instructions. For example, Sheen's case (1996) study taught the EG by explaining the differences between the languages (p. 188). In this study, they focused on several grammar features including copulas, articles, prepositions, the use of auxiliaries in questions and negatives, relative clauses, and specific verbs (Sheen, 2016, p. 189). Instruction regarding each of these features began with an explanation regarding the differences between the two languages. In addition, activities were used that emphasized the grammatical features of the L2 (p. 189). It is important to note that in this case study explanations regarding the differences were provided in Arabic at the beginning of the course (p. 188).
A similar method to the one used in the Sheen’s study (1996) was employed by Lin and Chuan’s (2014) to incorporate the CA input into instruction. Their study focused on the instruction of English Relative clauses to Mandarin Chinese speaking ELLs focusing on the differences that included the position of relative clauses within sentences. This included an explanation of the connection between the function of the Chinese character “de” (的) and how relative pronouns are decided in the English relative clause. Beyond providing explanations, Lin and Chuan (2014, p. 101) also utilized comparisons tables to illustrate the difference in a visual manner to ELLs. While the three case studies highlighted in this section incorporated specific strategies here are potentially many different methods to incorporate the information from Linguistic Analysis, CAH, EA, and SFL, with the most common being explicit explanation. While Linguistic Analysis has proven to assist in providing effective instruction, there are potential challenges when trying to incorporate them in real-world situations.

Potential Challenges. The incorporation of Linguistic Analysis into instructional methods is not without potential challenges. During the research and writing of this literature review, three main challenges have been identified that could deter ESL and other teachers from utilizing Linguistic Analysis or any of the three processes discussed. The first is that conducting Linguistic Analysis requires additional time. For teachers who have heavy workloads, conducting Linguistic Analysis or the processes may be an additional step whose time requirement may not be feasible with other required best practices and assignments. The second challenge is that Linguistic Analysis can require data sets (and even multiple data sets of one
language or more) to be collected. This is also an additional step beyond the actual comparison that increases the amount of time needed, which also requires additional steps and time.

The third challenge is that in a U.S. public school setting, the students generally come from several different L1 backgrounds. This would require the teachers to conduct several different linguistic analyses in order for it to provide adequate information for instruction. Teachers would then have to construct different methods for each language, if there are variances, for instruction. All in all, the time that would need to be allocated to conducting Linguistic Analysis or any of its processes may prevent teachers from utilizing them to inform their teaching. While there are potential challenges to using Linguistic Analysis to inform instruction, there are also solutions. These solutions will be discussed in chapter three during the description of the project.

As previously mentioned in the second section of this literature review, early case studies testing CAH and EA did indicate that these methods could fail to predict the true origins of errors. However, more recent case studies have shown CAH and EA can be an effective tool for instruction either through explicit explanations, visual aids, or other methods. The case studies conducted by Sheen (1996) and Romero and Manjarres (2017) demonstrated how utilizing information gained from CAH and EA can provide more effective instruction. Furthermore, as Ching-Ying Lin and Shu-Yuan Chuan (2014) discovered, ELL students appreciated the incorporation of CAH information into instruction and supported its continued usage. While CAH and EA may fail to predict or account for all forms of errors or language learning
difficulties, the information gained from the analysis can be beneficial in determining the underlying issues that the ELL is having. In addition, the information regarding the underlying issues, generated by the analysis, coupled with knowledge about Universal Grammar (UG) can be beneficial to an ESL practitioner (Erku, personal communication, September 25th, 2019).

Chapter Summary

Chapter Two has delved into a discussion involving the literature connected to the research question: how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator’s understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)? The literature presented in this chapter was divided into three sections; First Language (L1) and Second Language Acquisition (SLA), Linguistic Analysis and Processes, and Incorporation into Instruction. Theories connected to SLA including UG, Interlanguage, and transfer were identified from the literature as being important due to their connections to L1 and L2. Linguistic Analysis, along with CAH, EA, and SFL, were then discussed in order to present the approaches on how languages can be compared and analyzed to determine the differences that could inform instruction. The last part of this literature review focused on how Linguistic Analysis and the three processes could inform instruction. This section detailed studies that had focused on the process along with their conclusions. This section concluded by discussing how teachers can use Linguistic Analysis and the three processes in their instruction.
Chapter Three Preview

Chapter Three will provide an in-depth description of the project connected to this capstone. The details of Chapter Three will include an overview of the project, the intended audience and context, along with the framework and theories that are connected. Also included in Chapter Three is a discussion involving the rationale for the project and a timeline.
Chapter Three

Design and Creation of the Capstone Project

Introduction

Chapter Three provides a detailed description of the project connected to this capstone's research question: *how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator’s understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)*? This project was designed to give teachers a resource, taking the form of a website, that can be utilized to incorporate Linguistic Analysis and relevant processes into their instruction methods. The ultimate goal of this project is to increase the awareness of Linguistic Analysis amongst educators, along with potential uses of Linguistic Analysis in informing instruction. This project also aims to demonstrate how Linguistic Analysis can be used to provide more effective instruction to students. This chapter includes information regarding the overall framework of the project, the research theories, the intended audience, and a detailed description of the project itself. In addition, this chapter discusses solutions to problems mentioned in Chapter Two along with the potential future development of this project beyond this capstone.

Overview of the Project

This project takes the form of a website that provides information about Linguistic Analysis and processes such as Content Analysis Hypothesis (CAH), and Error Analysis (EA), along with how to utilize the information gained during instruction. The framework of this project has been designed along the Pragmatic Worldview and is essentially concerned with
solutions to problems and applications. The intention of the website is to provide teachers with a venue that can be used to learn about Linguistic Analysis. Educators can then use the website’s information to design and create instructional materials for teaching. The choice of a website over other venues is due to the writer’s educational position at the time of the project’s construction, along with the potential for continued development growth that a website offers, in regards to the project after the completion of the capstone. Furthermore, a website has a larger potential of reaching a wider audience along with its ability to allow for the development of a community dedicated to the incorporation of Linguistic Analysis into instruction in the future. The website contains professional developments, articles and research about the subject, and an example of Linguistic Analysis, along with ideas of how Linguistic Analysis can be used to inform instruction.

**Project Audience**

This project has been primarily focused on and developed for English as a Second Language (ESL) teachers and students by a licensed K-12 ESL teacher and an MA TESOL graduate student. Therefore the main intended audience and recipients of this project are ESL teachers and students. This project can be utilized and adapted to teach the English language to students from any first language (L1) background and is being constructed for both monolingual L1 and multilingual L1 classrooms. This project can also be adapted for a wide range of teaching scenarios, from an international school to a language center to a U.S. public school setting. The chosen languages used in this project reflect the writer's teaching situation along with future potential situations in Minnesota, U.S. Therefore the common languages found within these settings will be used. This project is designed to allow teachers to use these
examples to conduct their own Linguistic Analysis and to develop instruction methods based on those analyses.

While the main intended audience of this project has been ESL-focused, this project can also be used to inform the instruction of languages besides English along with instruction in other content situations. Regardless of what language is being taught, Linguistic Analysis and processes can be used to inform instruction. For example, an English L1 speaker who is learning Spanish or a French L1 speaker learning Mandarin Chinese can also be taught using methods that have been informed by Linguistic Analysis and the connected processes discussed in this capstone.

In addition to language teachers, mainstream teachers in the U.S. public schools (or in private and other countries’ school systems) could also benefit from this project. For example, social studies, science, or English literature teachers could use Systemic Functional Linguistics (SFL) to aid in teaching their subject to ELLs within their classroom. SFL could also be utilized to inform instruction to native speakers. While the development of this project is focusing on ESL and ELL students, its components have the potential for a much wider audience.

**Research Theories**

As discussed in Chapter Two, there are several case studies that support Linguistic Analysis’ effectiveness and popularity with students. According to Fries, Lado and Di Pietro (as cited in Freire & Kunzel, 1984), the best teaching methods would utilize the information from CAH by emphasizing the differences (p. 158). Freire and Kunzel (1984) continue to state that Fries further claimed that, “The most effective materials (for L2 teaching) are those based upon the scientific description of the language to be learned, carefully compared with the parallel
description of the native language of the learner” (p. 158). Another way that Linguistic Analysis can support effective instruction for ELLs is described by Sheen (1996) in his case study.

Sheen’s (1996) study illustrates how input from CAH plays a role in providing more effective instruction to ELLs. Sheen states that he is able to draw the conclusion that CAH input provides more effective instruction because of his study’s results. Sheen’s (1996) study found that:

The t-scores indicate a high level of significance for the comparisons of the error rates for the CA items with the exception of the oral rates for the copula, indefinite article, prepositions, and relative clauses. On the other hand, the comparison of error rates for the non-CA input is appreciably below the level of significance. (p. 191)

In addition to research by Sheen (1996), the results from Lin and Chuan’s 2014 study also provide further support for the use of processes, like EA, due to the lower error types of the targeted features found within the EG in comparison to the control group (CG). For example, in Lin and Chuan’s (2014, p.102) research, the EG group saw a reduction of redundant use of pronouns with only a 16% error rate, while the CG had a 26% error rate. The three case studies described in this section support the idea that Linguistic Analysis can provide a more effective instruction and thus provide a rationale for this capstone project.

**Project Description**

As previously mentioned, this project is in the form of a website. The decision to develop a website was influenced by the writer’s teaching situation along with the potential to present this project to a wider audience. Furthermore, a website allows for the continued growth of the project after the completion of the capstone. For the initial development of this website
for the capstone project, the chosen platform that has been used is New Google Sites. This platform was chosen due to the researcher’s familiarity with the Google Classic platform and its ability to connect to Google products such as Google Drive and Docs. This section is going to discuss the development of the website along with the elements that will be present and the design principles used in its construction.

The design principles that guided the construction of the project’s website came from Research-Based Web Design and Usability Guidelines written and compiled by the USA Department of Health and Human Services (Department of Health and Human Services, 2006). Major design components that have been integrated into the design of this website include:

- **1:1 Provide Useful Content** - The content on the website provides information regarding a topic that can help in the construction of more effective instruction.
- **1:3 Understand and meet User’s Expectations**
- **2:1 Do Not Display Unsolicited Windows or Graphics** - The website platform was chosen due to being ad and pop-up free.
- **2:2 Increase Website Credibility** - In order to show the credibility of the website all information and images have been cited. Along with the information being cited, reference lists for both the information and images have been provided.
- **5:1 Enable Access to the Homepage** - The homepage can be accessed on all pages from the link on the upper left hand corner.
- **5:2 Show All Major Options on the Homepage** - All Major options are displayed in the right hand panel that is displayed, not just on the Homepage, but on all.
● 5:4 Communicate the Web Site’s Value and Purpose - The purpose and value of the website is conveyed on the homepage and in the project overview.

● 6:2 Place Important Items Consistently - All important clickable items are displayed on the left hand side of the page.

● 7:3 Use Clickable ‘List of Contents’ on Long Pages - On long pages a clickable content list has been placed at the top of the page.

● 9:1 Use Clear Category Labels - Each category on the website has clearly been labeled to indicate what the section is about in addition to separating content.

● 9:2 Provide Descriptive Page Titles - The title of each page was carefully developed in order to provide clear insight and guidance regarding the content of that page.

● 11:2 Format Common Items Consistently

These design components represent a portion of the ones incorporated into this project that helped to shape the outlook and function of the website.

There are three main parts of the website that have been developed as part of this project. The first part of the website is the project overview section which both introduces the website and lays the foundation including the rationale. In this section, information about the capstone and research question, along with background information of the developer of this project has been presented. In addition, this section establishes the rationale behind the project, along with the project’s potential impact on the ESL teaching field. This section of the website is meant to introduce individuals viewing the website to the project’s background.

The second part of the website is the major component of this project and is the Professional Development (PD) section. This section of the website acts as a series of PDs that
provides a wide range of information connected to the research question, with the intention to provide teachers with more information about Linguistic Analysis. These PDs are designed to simulate an in-person PD, including steps and interactive activities. There are four PDs with the following topics: (1) Why incorporate L1 information?, (2) What are Linguistic Analysis and processes?, (3) How to conduct Linguistic Analysis and processes, and (4) Incorporation into instruction.

The first PD is titled, “Why incorporate L1 information?” and seeks to provide an understanding of Second Language Acquisition (SLA) and the role of the L1 in SLA in order to establish an understanding of the potential benefit of Linguistic Analysis. In this PD, there are three steps. The first step discusses Universal Grammar (UG) and its role in SLA. The second step discusses the role of the L1 in SLA by examining the theories of transfer and interlanguage. The first PD concludes with an assessment in the form of a forum where the participants are given the opportunity to discuss what they have learned and to share their own knowledge regarding SLA and the role of the L1 in SLA.

The second PD focuses on introducing Linguistic Analysis and processes. In this PD there are four steps that present the participant with background knowledge of the topics. The first step reviews Linguistic Analysis, while step two focuses on Contrastive Analysis Hypothesis (CAH), and step three discusses Error Analysis (EA). During the development of this project, it was decided to remove Systemic Functional Linguistics (SLF) from this PD in order to reduce the amount of content presented. Each of the previously mentioned steps discusses the history, development, and constraints surrounding each of the main topics of the steps. The final step is the assessment which, for this PD, is also participation in a forum.
The third PD has two steps and reviews actually conducting Linguistic Analysis and processes. The first step in this PD presents a language sample and illustrates the results of an analysis that had been conducted. The language sample is a translation of ten sentences into Mandarin Chinese and the analysis goes through the three recommended steps plus the additional extra step. In the second step, the participants are then given an opportunity to conduct their own analysis using the language samples provided on the website. There are two language samples provided in this step. The language samples have been translated into Korean and Mandarin Chinese and contain identical content. This has been done in order to give the participants a comparison in how different languages might need different language features addressed. After conducting their own analysis, participants have the opportunity to share their analysis results in a dedicated forum. This offers the participant an opportunity to review other individuals’ work in addition to posing questions or thoughts and sharing relevant or additional information. Each element of this section has been designed to enable individuals to conduct Linguistic Analysis in real-world situations.

The fourth and final PD focuses on incorporating Linguistic Analysis and processes into instruction and has three steps. The first step is an overview and the second step focuses on the case studies that were highlighted in Chapter Two of this paper. The third step reviews how the previously discussed case studies utilized the information from their analysis into their instruction. The fourth step starts by using the example analysis from step one in the third professional development and discusses ideas in how instruction might proceed. This step then concludes with a connected forum that offer participants the opportunity to engage and interact with others. This forum provides participants an opportunity to take their analysis from step two
in the third professional development and discuss their own instructional ideas. The aim of this part is to give individuals an opportunity to begin developing ideas on how to include the information from Linguistic Analysis into instruction. The forum will also be a precursor to building a community dedicated to sharing information connected to Linguistic Analysis and the three processes.

The third part of the website are the collaboration forums. In the first forum, participants can share and discuss additional Linguistic Analyses that they have conducted beyond the PD. This is meant to give individuals a safe and trusted venue to generate feedback. The second forum is for sharing ideas regarding incorporating the information derived into instruction. These forums are meant to be the starting vehicle that might eventually fuel the launch and development of a more formal database of Analysis and instruction ideas in order to reduce the challenges that exist.

**Potential Solutions to Challenges along with Future Development of the Project**

In the literature review of Chapter Two, a discussion occurred surrounding the potential problems connected to this research question. The project, which is the culminating element of this capstone, could be considered to be the start of the solution to these challenges. As discussed, this capstone results in a website that will provide professional developments focused on Linguistic Analysis and examples of how they can be used to inform instruction methods. A further extension of this capstone, after its submission, would be to construct two additional sections of the website.
The first section is a dedicated space where teachers can submit Linguistic Analyses that they have conducted in different languages, focusing on different language functions. The second section builds upon the first by providing a forum where individuals can submit examples of how they incorporated the Linguistic Analysis information into their instruction. There is also a forum where people could post questions dedicated to the research community. The intent of this extension would be to build a dedicated community where teachers could share their results and ideas in order to reduce the amount of time required. Through the further development of this project beyond the capstone, several of the potential challenges could have a solution.

**Timeline**

This project was developed in the fall of 2019 as part of the GED 8490 course at Hamline University in St. Paul, MN. The project description discussed previously in this chapter was completed by December of 2019 but beyond that date, it is the intent of this capstone writer to continue to further develop this project. This project will continue to be developed to include additional languages, further forms of Linguistic Analysis, forums, and additional examples of incorporating Linguistic Analysis. It is the overall intent of this writer to create an online database and community that acts as a resource for educators.

**Summary**

Chapter Three has focused on discussing the project connected to this capstone and the research question: how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator’s understanding of a student’s native language (L1) in order to develop more effective
This chapter began by providing a general overview of the project. The chapter then moved on to detail the main intended audience of the project along with additional groups. The third and fourth section reviewed the research theories and choice of methods that were incorporated into this project. Finally, this chapter provided a more detailed project description along with the timeline.

**Chapter Four Preview**

Chapter Four is a reflective narrative that will trace the development of the project that has been discussed in chapter three. Included in this chapter will be a discussion surrounding the elements from chapter two, the literature review, that were determined during the course of the project to have been important. In addition, the chapter will discuss the implications of the project along with identified limitations. The chapter will then conclude with a discussion surrounding how to promote this project along with its benefits to the ESL field.
CHAPTER FOUR

Conclusion and Analysis

Introduction

The purpose of this capstone paper and project has been focused on developing an answer to the research question: how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator’s understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)? Chapters One through Three of this paper have presented the research question and laid the foundation for the project.

Chapter One reviewed the researcher’s background, discussing how the personal and professional experiences of the researcher led to the development of the research question. Chapter One also saw a discussion regarding the rationale behind the question and the impact that this paper and project might have on the stakeholders. Chapter Two detailed the important literature that had been identified as relevant to the research question in order to provide background and establish reasoning for the research question. This literature review was grouped into three categories; Second Language Acquisition (SLA), Linguistic Analysis and Processes, and Incorporation into Instruction. Chapter Three outlined the project connected to this capstone paper and developed from the research question. Chapter Three described the construction and components of the project, along with the theories used in the project’s development in order to provide an illustration of what had been created.

Chapter Four, which is broken into six sections, will focus on concluding this paper and project by discussing the results. The first section details the major learnings, including personal
knowledge gained through the process of researching, writing, and developing the project. This section will also include a review of important elements of the literature reviewed in Chapter Two. The second section will detail the implications of the project while the third section will discuss limitations with the projects. The fourth section of this chapter reviews recommendations for future work that is similar or related to this capstone project. The fifth section will detail how the results of this project might be communicated to the public. The sixth and final section of this chapter will discuss how this project benefits the TESOL profession.

**Major Learnings**

With every paper and project that is conducted, learning occurs during the process. This section of Chapter Four focuses on the major learnings that occurred during the research, the writing of the capstone paper, and the creation of the project. This section will be divided into two subsections, with the first subsection focusing on my personal learning during the course of this capstone, while the second subsection focuses on a review of the most relevant literature from Chapter Two of this project.

**Personal Learnings.** Throughout the process of researching, writing, and constructing this project, I have not only learned a great deal about Linguistic Analysis and processes, but I have also shifted my beliefs and views on what I consider to be core components in language teaching. Prior to being introduced to this topic in my Advanced Linguistics course in the Fall of 2018, I subscribed to some of the dominant monolingual instructional principles that are promoted by educational policies within institutions in the US. As I delved into the research surrounding this topic, I realized that research regarding the dominant monolingual principles was generally unsupported (Cummins, 2007, p. 222). Cummins (2007) states that cognitive
psychology research indicates that building on students’ prior knowledge develops optimal learning. Cummins (2007) further states that, “If students’ prior knowledge is encoded in their L1, then their L1 is clearly relevant to their learning even when instruction is through the medium of L2 (p. 231).” These statements struck me because it harkens to common sense in regards to how we learn and further shook my concept of the do’s and don'ts of language instruction.

An additional element that has been learned during the research, writing, and construction of the project is that language educators should not shy away from teaching students about linguistics. During my research, especially in the case studies, explicit instruction that highlights differences and teaching linguistics seems to be desired the most by students. For example, Holland (2013) states that analytical thinkers (which I consider myself to be), “are frequently unsatisfied with learning how to speak English; they also want to know why particular grammar points work the way they do, as well as the specific conditioning environments for pronunciation rules (p. 139).” This has led me to revise my consideration of linguistics and begin to instruct my students with the foundations.

**Literature Review.** The literature connected to this research question was both extensive and very broad in nature. The identified research discussed in this paper presents only a percentage of what can be considered to be relevant literature. Throughout the research conducted, I have focused on the common theme of how Linguistic Analysis and processes can be used to provide educators with knowledge about a student’s L1 that can then lead to more effective instruction. In this section, I am going to review the most important literature by tracing this theme through the three major sections of Chapter Two: Literature Review, which
included first language and second language acquisition, Linguistic Analysis and processes, and incorporation into instruction.

The research for this project began by seeking information on why students’ L1 should be taken into consideration during Second Language Acquisition (SLA). This section focused on the impact of the L1 on the acquisition of the L2 by examining theories such as Universal Grammar and transference. In this section, articles written by Jim Cummins, such as Rethinking Monolingual Instructional Strategies in Multilingual Classrooms, became particularly relevant for the argument for why the L1 is important in SLA. Cummins (2007) states that, “The role of prior knowledge is particularly relevant to the issue of teaching for cross-linguistic transfer because if knowledge is encoded in student’s L1, then the engagement of prior knowledge is invariably mediated through L1 (p. 232).” Cummins (2007) points out that Donovan and Bransford (2005) remark that, “new understandings are constructed on a foundation of existing understandings and experiences (p. 232). Cummins (2007) further states,

This principle implies that when students are being educated through a second language (either in second/foreign language instruction or in bilingual/immersion programs) instruction should explicitly attempt to activate students’ prior knowledge and build relevant background knowledge as necessary (p. 207). While Cummins presented persuasive arguments for L1 incorporations into L2 instruction authors such as Gass and Lightbown and Spada became particularly important due to the descriptive nature of their work. Each of these authors presented a broad range overview of SLA and linguistics.
After reviewing research on first language and Second Language Acquisition (SLA), the literature review began to establish the foundation for Linguistic Analysis and processes. In this section, the most relevant literature dealt with exploring Linguistic Analysis and processes. Of the literature reviewed, the most important piece discussed was Maggie Tallerman’s text *Understanding Syntax*, which detailed the descriptive approach to Linguistic Analysis that was adopted in this paper and project. In addition to the previously mentioned literature, the articles by Sheen (1996), Romero and Manjarres (2017), and Lin and Chuan (2014) were also particularly relevant due to the background information they presented about CAH and EA.

The culminating section of the literature review saw a discussion surrounding the incorporation of the knowledge derived from Linguistic Analysis and processes into instruction. At the core of this section were articles detailing case studies that focused on the impact of using Linguistic Analysis and processes in making instructional decisions. Three case studies were discussed in detail and had been done by Sheen (1996), Romero and Manjarres (2017), and Lin and Chuan (2014). Sheen’s case study (1996, p. 192) demonstrated that CAH input helped to reduce error rate while Romero and Manjarres’ (2017, p. 135) study found that CAH and EA helped to construct more suitable lesson activities. In addition, Lin and Chuan’s study also indicated that the ELLs felt that the support given by the CAH approach helped them to learn and that they wished to continue to have instruction in that manner (Lin & Chuan, 2014, p. 1 & 7). The importance of these case studies continued to develop throughout the construction of this paper and its associated project. By the end of this experience, these case studies had become some of the most valuable pieces of literature along with Tallerman’s work (2015).
The literature review that I conducted provided information about the role of the L1 in SLA by reviewing Universal Grammar (UG) and the theories of language transfer and interlanguage. The literature review also helped to establish an understanding of Linguistic Analysis and processes and how the derived information can inform instruction. This research impacted how I constructed my project’s website along with identifying relevant information that was then reviewed as part of the professional development associated with the website.

Implications

In this section, I will detail the implications that can be made from this project. By designing a website that acts as an online professional development platform, I have constructed a resource to support ESL teachers’ continued development in providing effective instruction. Fellow educators and I can use this resource to continue to learn more about this topic by adding additional PDs and holding discussions surrounding this topic.

This project is meant to educate ESL teachers about this topic and how it can be utilized to provide more effective instruction. Upon submission of this capstone paper, the connected project has had the foundations established. It is my hope that this project continues to evolve into a resource with additional professional development and a community where connections can be made and information shared. Furthermore, this website offers a place to construct databases with completed analysis that can be used by educators to develop instruction that could be more effective.

Limitations

This section of Chapter Four will discuss the limitations of this project. While this project has sought to reduce the limitations surrounding the research question, a few remain. This
The project has been successful in meeting its primary goal of establishing a resource for teachers about incorporating Linguistic Analysis and processes into instruction. In regards to this goal there have been no perceived limitations observed beyond the wide and broad scope of the information presented. A general limitation that has been identified is the broad nature of the information provided. This paper and the initial state of the project acts as a general overview and is a theory-free framework, making its information more general. In addition to the general nature of the information provided, other limitations have been identified. These limitations involve the project’s continued development. Two major limitations have been found.

The most considerable limitation of this project is its future reliance on the building of a community with members who are active participants. For the purpose of this capstone project, an active participant is defined as an individual who does one or several of the following actions; sharing their own Linguistic Analysis or instruction ideas, participating in the forums, or submitting blogs or new Professional Developments (PDs). This limitation involves the recruitment of members who become active participants by presenting professional and quality contributions to the community. The concept of this website is the cost-free exchange of information and ideas. A small membership fee might be required to access the databases and forums in order to fund the site.

While this website provides important information regarding the incorporation of information derived from Linguistic Analysis and processes into instruction, it is in its initial state. To reach its full potential, the website requires individuals to contribute analysis and instruction ideas and to submit blog postings and additional Professional Developments to the website. This exchange of knowledge needs a community that is versed in the topic and willing
to participate. This is a limitation because it is currently unknown if people would be willing to participate.

A second identified potential limitation involves the stewardship and maintenance of the website. For this project to reach its potential, and function once it has, an individual or several need to monitor and provide guidance. The time required to do this may be infeasible to maintain without financial compensation. This would then either require the incorporation of ads, which could reduce the professional integrity of the site, or a membership fee, which might reduce participation, to generate income.

Recommendations for Future Work

In this section I will discuss ideas for future works that are similar or related to this capstone project, including recommendations based on the findings of this project. My first recommendation involves the further expansion of this project in several ways. The first would be to develop the forums into a more formal and more user-friendly collection of databases that still allow for discussion. The second would be to engage individuals more versed in specific elements connected to this project to cooperate in the construction of additional Professional Developments (PDs) to provide more specific and detailed knowledge. These elements could include additional processes and also theory frameworks for Linguistic Analysis.

A second recommendation for future work related to this project is to construct curriculum and lesson plans around information derived from Linguistic Analysis and its processes. This could be done in connection with the incorporation-into-instruction component of this project or done as a separate element. This curriculum development could also include focusing on curriculum for a class with students who have a variety of different L1 backgrounds.
All of the identified case studies discussed in the literature review had students with the same L1. It would be intriguing to investigate how instruction might occur when the classrooms have multiple L1s.

A third recommendation for future work that is related to this project is researching the impact of incorporating basic or foundational linguistics into instruction. For example, does having an understanding about morphemes and morphology help or hinder a student’s understanding of prefixes and suffixes and their usage in word building?

**Presentation of Project Results**

How to present the results of a project is an important element that needs to be considered. This is especially true for this project, since its aspirations of future growth are incumbent on the participation of other individuals. This future growth would only benefit from a diverse base of participants, because of the potential greater amount of languages addressed and the larger source of ideas and knowledge being shared. I have identified four main ways in which I can communicate the results of this capstone project.

The first two means of communication rely on the power of social media, such as Twitter and Facebook. Using Twitter and its hashtags can allow for this project to be launched and then continuously communicated through retweets. Additional tweets communicating new additions to the site, or even requesting translations or analysis, can continue to spread the existence of this project. Facebook would be another powerful tool to communicate this project and its purpose to a wider audience. The usage of communication on Facebook, through postings on personal pages or groups, would allow for this project to be communicated to specific groups and
individuals. Important Facebook groups would include MinneTESOL and TESOL International Association.

The third method of communication is to approach organisations such as MinneTESOL and ask to present this project through posters, booths or presentations at conferences or meetings. In addition to approaching physical groups, consider online organizations such as Colorin Colorado or Learning English - BBC. Seek to promote on those websites through appropriate means. The fourth method of communication is similar to the third method, in that it involves approaching ESL directors of school districts. While professional developments surrounding this topic and project could be offered, a more realistic option would be to inquire about the possibility of these directors posting literature advertising the website or promoting the project through emails.

**Benefit to the TESOL profession**

The potential benefits of this project to the TESOL profession and to the educational profession as a whole could be wide. This project seeks to promote a tool that can be utilized to develop more effective instruction to enhance the English Language Proficiency of ELLs in a shorter time, in order for them to thrive in English speaking settings.

One of the greatest benefits of this project is the creation of a single resource dedicated to this topic, that has gathered information from a variety of sources and compiled it in one location. This allows for educators to gain an understanding of this topic through the information and Professional Developments on the website without having to conduct their own research or read a large quantity of articles which have instead been synthesized. This promotes information about a topic that is not readily discussed. For myself, even though I took a course
on Linguistics while gaining my ESL licenses, I did not become aware of Linguistic Analysis until Advanced Linguistics, a course that was part of my MA TESOL program. This project also provides a resource beyond knowledge in that it offers the potential to construct a database and forum dedicated to gathering and sharing the results of Linguistic Analysis and processes.

**Conclusion**

Throughout the process of writing this paper and constructing the connected project, I have sought to answer the research question; how can an online professional development resource and community for teachers support understanding of using Linguistic Analysis and processes to deepen an educator's understanding of a student’s native language (L1) in order to develop more effective instruction in the second language (L2)? To answer this question, I conducted extensive research and then constructed a website that acts as an online professional development resource with forums to promote knowledge-sharing through communities. The project connected to this paper is the result of the research I conducted during this process, along with ideas developed in conjunction to this process. This project has gone through a series of revisions that have resulted in a finished product that can be a valuable resource.

Education does not end once you have left the classroom or have received a diploma. This project provides individuals with the opportunity to continue learning and develop skills to provide more effective instruction. Furthermore, this project offers a dedicated space to present future Professional Developments connected to this topic and a database for analysis to be shared.
References


