THE RELATIONSHIP BETWEEN ENGLISH LANGUAGE EDUCATION POLICIES AND ECONOMIC GROWTH IN ASIA

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Dedicated to my parents, Don, Kaye, and Colleen.

Who are all waiting for me to get a real job.
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ABSTRACT

This study sets out to calculate the financial returns of English Language Education Policies to a national economy within Asia, with a secondary goal of ascertaining whether this return is being collected by all participating countries equally. Using Thomas Green’s theory of the Educational System (1997) as a framework for exploring how education systems function in society, this study looks to education, development, and reproduction theories before turning to the history of English in Asia to gain geographical context.

Using a pragmatic epistemology, I employ quantitative methodology and use data in the form of government curricula and English language syllabi from 19 countries around Asia-Pacific. These represent a country’s national English Education policies and were scored based on contemporary English as a Foreign Language practices, as recommended by scholarly literature. Using the Instrumental Variable process, this constructed data pairs with an economic variable and historical data which serves as the instrumental variable. These three variables are processed through the Two Stage Least Squares regression sequence provided by SPSS.

The results of the statistical analysis show that an increase of one standard deviation in the language variable results in a .618 rise in the standardized beta of the 2014 economic variable. This increase is compared with the economic data of the sample countries in hopes of identifying differences in potential financial impacts between countries, and whether results have some validity when contextualized into Asia’s education and economic hierarchy. Green’s theory then attempts to discover whether there is a systemic inequality between education systems that would encourage such an economic disparity. Reproduction Theory then attempts to evaluate how this inequality is present in institutional practices across the region.
Overall, I found English Language Education Policies have a significant return that would be considered large and small to different countries, based on their economic indicator. Furthermore, through using Green’s theories and Reproduction Theory, there are institutional practices present in elite countries that limit the working class’ abilities to access these increases to their economy via English Language Education Policies.
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LIST OF ABBREVIATIONS

2SLS – Two Stage Least Squares Regression
AEC – ASEAN Economic Community
ASEAN – Association of South East Asian Nations
CCRT – Cultural Capital Reproduction Theory
ELEP – English Language Education Policy
ETS – Education Testing Services
GDP – Gross Domestic Product
GDP PPP – Gross Domestic Product of Purchasing Power Parity
HCEF – Human Capital Earnings Function
HDI – Human Development Index
ICT – Information and Communication Technology
IELTS – International English Language Testing Service
IMF – International Monetary Fund
INGO – International Non-Government Organization
IV – Instrumental Variable Approach
NS – Native Speakers
NNS – Non-Native Speakers
OECD – Organization for Economic Cooperation and Development
OLS – Ordinary Least Squares
RQ1 – Research Question One
RQ2 – Research Question Two
SPSS – Statistical Package for the Social Sciences
UN – United Nations
UIS – United Nations Institute of Statistics
UNHDDR – United Nations Human Development Report
USD – United States Dollar
WTO – World Trade Organization
YOE – Year of Entry Variable
CHAPTER 1. INTRODUCTION AND BACKGROUND

In today’s global market place, multicultural and multiliteracy skills are of high value by governments and international employers. This is not only a repercussion of globalization, but also a reflection of the educational standards 21st Century citizens are expected to meet. While multicultural in this context refers to the ability to interact with others of different cultures, multiliteracy identifies people who are proficient in multiple languages, including computer literacy (Warschauer, 2000). Desirable foreign language skills change with every era of globalization. In the modern age of globalization, which began some 20-30 years ago (Sengupta, 2001; Steger, 2013), English became the new lingua franca and therefore a crucial focal point in education (Markee, 2000).

The reasons for the English language’s rise in popularity are numerous but range from technological, political and financial spheres of influence. However, it is important to first give a concise definition of globalization in linguistic and economic contexts, followed by a brief historical overview [confined to the last 30-40 years, also known as the contemporary era of globalization (Steger, 2013)] to understand how the world arrived at present day demands for English.

While globalization has many definitions, the general concept refers to the strengthening of political, social and economic ties among countries (Bielsa, 2005). It is “a set of social processes that transform our present social condition of conventional nationality into one of globality” (Steger, 2013, p.9). In economic spheres it means the removal of national boundaries for a more efficient and freer flow of capital and trade in goods and services (Ambirajan, 2000; Hochschild, 1998; Steger, 2013; Jones, 1998). In a linguistic interpretation, it refers to more fluid
communication among different nationalities, for instance an individual’s bilingualism (or trilingualism), or even the rise of a language as a lingua franca amongst nations (Phillipson, 2008; Van Parijs, 2000). Globalization illustrates not only the changes in relationships between nations, but also changes within countries and their response to external pressures and opportunities (Jones, 1998), such as international trade, and similar.

Introducing the geographical area of this study, the last three decades saw a surge of “English fever” (Krashen, 2003; Park, 2009) throughout Asia. Both private and government education systems in Asian nations have implemented wide-scale programs in hopes of either keeping pace with globalization or entering into existing global markets. With English described as an essential tool for globalizing a population and advancing in social, technological and economic spheres (Jeon, 2006; Nunan, 2003), the benefits of increasing human capital with it are mostly associated with economics and trade, and is most influential in the race for English language proficiency (Chua, 2010; Coleman, 2011; Sargeant & Erling, 2013; Hamid, 2010; Hsieh, 2010). Reasons behind these associations are not singular, and it could be said that English facilitated globalization as much as globalization increased English’s popularity (Zughoul, 2003).

The political sphere of English’s influence in the late 20th Century cannot be discussed without referring to its economic sway. Politically, from the late 1970s through to the late 1980s saw the fall of the Berlin Wall, the end of the Cold War and the end of the United Soviet Socialist Republic (USSR). While all three events had individual importance, together they signaled the victory of Western ideology over authoritarian-socialism and dissemination of liberal economic thought (Gibson, 2005; Sengupta, 2001; Steger, 2013). The fall of the Berlin Wall in particular was a “clash of cultures, rather than civilizations” (Gibson, 2005, p. 25) and
was the commencement of the domination of Western liberal thought. New political and economic configurations emerged in following years (De Almieda, 2007) and the liberal-capitalist governance of the United States of America (U.S.) was exported to the third world in the manner of neocolonialism alongside English (Dua, 1994; Steger, 2013). In some parts of Asia, the death of China’s Chairman Mao Zedong, Vietnam’s Ho Chi Minh and other politically influential leaders, made way for capitalist ideologies in the form of the Open Door Policies and Đổi Mới (Tisdell, 2009), leading to more interaction with the West in the form of trade.

Many countries in the Asia-Pacific possess politically strong ties to native English speaking countries such as the United States of America (U.S.) and the United Kingdom (U.K.) due to periods of colonialism, the last as recent as 1997: the return of annexed Hong Kong back to China. Colonial ties are often at the root of many educational systems within the colonized nations (Dua, 1994) and have been instrumental to English’s globalized status (Tikly, 2001). In the contemporary setting, many of these former colonies made concerted efforts with language planning and policy to balance the needs of globalization and English with cultural identity and heritage (Dua, 1994). For example, in Brunei, teaching Islamic culture and identity through English in elementary school is encouraged.

English’s influence on the economic sphere is inextricably linked with the political sphere and the ideologies of new governments. It has even been thought that the term “lingua franca” be changed to “lingua economica” (Phillipson, 2008, p.1). Though international commerce since the early 19th Century has rose, global exports in particular rose from 11% to 18% of the global Gross Domestic Product (GDP) from 1980 to 1990, while services followed suit from 15% to 22% (Ambirajan, 2000), signaling the beginning of the latest stage of globalization (Steger, 2013). Historically, accelerations in economic growth contribute not only
to advances in modern science and technologies, but also capacity building in infrastructure (Ambirajan, 2000; Kuznets, 1973).

While it may be viewed that economics and politics are necessarily intertwined, the same can be said of economics and development; it may even be that the two are synonymous (Kuznets, 1973). Market growth and development in Asia since the 1980s has been accompanied with educational policy reforms oriented around economic competitiveness (Rizvi & Lingard, 2010). Human capital, a staple of development, is key to competing and relieving poverty and is only increased through education (Bruthiaux, 2002; Stevens & Weale, 2003). English education has been tied to poverty reduction in the social consciousness to the extent that it has produced an entire market of shadow and private education, encouraged by governments through policies and ideologies that demonstrate the value of English and other globalization skills (Laitin, 1996; Petzold & Berns, 2000, as cited in Bruthiaux, 2002).

The political and economic developments occurring from the 1980s coincided with one of the most prominent influences of English in globalization: the advent of Information and Communication Technology (ICT) (Markee, 2000). As an invention of Western nations, early users had to know English in order to operate and access content. As late as 2002, nearly 90% of content on the Internet was in English (Wang, 2002). Although this figure declined to 70% in 2005, it was in spite of predictions that China would have more Chinese-speaking Internet users than the U.S. by 2010 (Jeon, 2006; Warschauer, 2000). As ICT diffused throughout the world, English’s early linguistic domination over the medium exerted influence over banking, trading and large scale industry, as these sectors became globalized and utilized ICT for growth and economic transactions (Chang, 2006; Jones, 1998; Fishman, 1996).
Finally, the social sphere is a result of these previous three. In his 1997 book *English as a Global Language*, David Crystal summarized these influences of English, exploring several key events and reasons for the proliferation of the language.

Academically, published books use English more than any other language, is the primary language for most major research publications (Dua, 1994), and is in higher education classrooms in many non-native speaking countries. Internationally, by 1997 English functioned as the language used for approximately 85% of 12,500 international organizations. This is demonstrated within Asia, as shown with the Association of South East Asian Nations (ASEAN), established in 1967, began with English as their operational language. Culturally, the U.S. dominated 85% of the increasingly popular film market, as well as 99% of popular music (Crystal, 1997). While all these events can be said to have had an independent impact, it was their amalgamation that influenced the dominance of the English language.

**Contemporary Context.**

Due to various factors that thrust the English language into popularity, English remains the lingua franca today. However, pressure for English proficiency is not only limited to external forces [such as International Non-Government Organizations (INGOs), Western nations and globalization in general], but also from internal agencies in Asia such as ASEAN and the Asia-Pacific Economic Cooperation (APEC). Mounting pressure from ASEAN to use English has risen and theoretically will be felt more in the year 2015, when the ASEAN Economic Community (AEC) is officially slated to begin (Association of South East Asian Nations, 2009).

Adopting a “Roadmap” for regional integration among its members, ASEAN created a detailed plan with goals to be achieved by 2015, in time for the commencement of the AEC
While the use of English is mentioned several times, the most noticeable elevation of the language is in “Promote the use of English as an international business language at the work place” (p.69). Since this document is aimed at integrating regional members, it is assumed that “internationally” refers to the use of English globally as well as intra-regionally (between ASEAN states). For instance, after 2015 a Laotian and Cambodian might use English to discuss their business.

Since the 2009 document, over half of the ASEAN members Ministries of Education have reformed their English Language Education Policies (ELEP). Indeed, the English curricula of all members of the ASEAN +3 group (China, Japan and Korea) have been overhauled. While the educational reform of one country influences those of surrounding countries (Cheng, 2009), not all are equal in resources. Major reforms in some countries, such as in Vietnam, where the National Foreign Languages 2020 Project was given a budget of approximately $442 million United States Dollar (USD) (Vietnam Ministry of Education and Training, 2008) are currently underway. However, such reforms can be over-reaching. Just over half way into the project, ministry officials have already reported that the project will not meet its targets and the teacher-training portion has already failed to meet its individual objectives (Nguyen, 2014).

Although this may indicate that the project timeline was overly ambitious, the goals of the project display the level of importance that governments place on English proficiency. While revisions are currently being conducted, there is no research yet on the impact of the cost to the program or to counties that have already implemented the program. Unfortunately, studies by Nunan (2003) demonstrate that Vietnam is not alone in rushing toward proficiency, and other countries within the region have also implemented programs without clear rationales or a detailed costs-and-benefit analysis.
While this example of ambitious planning is reason enough to rethink language education targets, there is also the issue of proving that an increase in English use leads to financial growth. There is little research that reveals causation between the English proficiency of citizens and national economic growth. The empirical evidence that exists is inconclusive (Nettle, 2000). This is likely due to several reasons, including: a) the difficulty of isolating the benefits of one skill in a national economy, b) language as a constant in nearly all aspects of societal and individual life, and c) insufficient and inconsistent sources of data.

In order to be competitive in financial markets against developed nations who have a reserve of English speakers, underdeveloped countries in Asia are implementing aggressive ELEPs, often without adequate resources. For example, in Cambodia, English language instruction is mandated to begin in the 5th grade. However, the government has conceded this is only possible if individual schools have the resources (Cambodian Ministry of Education and Youth, 2004).

The societal perception of English leading to personal success is a staple of education and society within Asia for many generations and will be explored further in Chapter Two. This belief is at the root of a whole new market in Asia, independent from government spending. It includes private schools that offer immersion programs in English, after-hours cram schools, textbooks, and the English testing market, with providers such as Education Testing Services (ETS), International English Language Testing Service (IELTS), The British Council, and others who have made testing administration in Asia a commodity.

However, if the benefits of English are familiar enough to create an entire market, what are the losses identified? Is the value of a gain the same as a lost opportunity? For nations that
struggle to keep up with the demands of a 21st Century infrastructure, having strong ELEPs may prove impossible until other facets of the education system, such as adequate teacher training for example, are in place. Premature ELEP implementation might prove costlier than planned.

**Purpose of the Study**

The primary purpose of this study is to examine whether there is a financial return of the investment in government ELEPs to national markets. The Asian continent provides a rich opportunity for investigation as there is a wide spectrum of economies, policies and investment levels to compare and contrast.

A secondary purpose is to discern whether a return is being unrewarded to countries that cannot keep pace with contemporary ELEP practices, due to a lack of financial resources and existing infrastructure. By collecting data on economic variables and English education programs, and then calculating rates of growth or return, it is anticipated that a greater understanding of what the race for English and proficiency means for less affluent countries with weaker ELEPs.

Lastly, this study seeks to understand whether strong and costly ELEPs are warranted based on their financial returns. By calculating what is quantitatively added to national economies and placing them in a framework of liabilities versus gains, there will be more contextual meaning as to whether requiring citizens to learn English is profitable on a national scale.
Research Questions and Rationale

The central research focus is to determine whether nation’s ELEPs are associated with a measured financial impact on its economy via human capital. Since it has been hypothesized that an education system producing fluent speakers would have greater opportunities available to them and encourage national economic development because of these skills, weak ELEPs might therefore produce poor speakers who would have little impact on the economy. However, this idea that strong ELEPs guarantee economic growth at a national level has yet to be empirically proven. Little evidence exists to show that an aggressive approach to developing proficient English speakers has a direct positive effect on GDP or other financial indicators.

Therefore this dissertation addresses the following research questions:

Research Question One (RQ1):

What quantifiable impact does an English Language Education Policy have on an Asian nation’s economy?

This question is the core of the study and as such, tries to begin by avoiding any bias, such as assuming that there is a relationship between ELEP and economies. The expression “quantifiable impact”, rather than simply “impact”, is used to note that the study is looking for empirical evidence. Much literature on the role of English in Asia is centered on cultural, business, and societal impacts of English and its hegemony using qualitative methodologies. While literature discussed in Chapter Two can add to an understanding of why English language proficiency has been raised to a skill of importance, it cannot supply quantitative evidence that expenditures are being matched with results.
It should also be noted that the study’s focus is limited to the Asian continent. While it may have future potential to be widened globally, the role the English language plays in Asia is unique in its social perceptions and business use. Although other nations around the globe might make more common use of English, none have the same level of societal importance or government and personal expenditure devoted to its acquisition.

Lastly considered is what will be assessed by this question. Yet to be defined are the parameters of an ELEP. While the variables and rationale will be discussed further in Chapter Three, for now an ELEP is classified as a compulsory school subject implemented at a national level in government public schools and with a national curriculum issued by the National Ministry of Education. The in-class components assessed are Teaching Methodology and Curriculum Content. Although there are other facets that could be considered essential to include in an assessment of a course (curriculum hours, etc.), these few overlapped with areas assessed elsewhere and are excluded. While these two are classified as in-class components of an ELEP, there are also several other variables that contribute to how well a language is taught and received by students who constitute the future work force.

Data pertaining to outside the classroom are: Minimum Years of Teacher Training Required, Average Elementary Class Size, Average Secondary Class Size and Mean Years of Schooling. These four components are noticeably not associated with learning a second language; however, they still do play an important role if trying to assess how much of an impact an ELEP makes on the economy via the nation’s human capital, due to the influence they hold over how much education a student receives and the teacher’s abilities.
Research Question Two (RQ2);

Is this impact evidence that Asian nations with weaker ELEPs are being deprived of financial returns?

This question uses results from RQ1 and posits them against the idea that there is financial and social inequality amongst Asian nations. Although the definitions of weak and strong will be defined through a scoring rubric and literature from Reproduction Theory, it is expected that weaker ELEPs will correlate with countries that have a lower income and less economic development. The word “deprived” is used to signal the inequality amongst nations by positing that if there were equal proficiency levels across countries, then there would be better opportunities for financial growth in the less developed nations.

The question hinges on an assumption that RQ1 finds a statistical relationship between ELEPs and the economy. In this case where there is a positive relationship between the two, this data will be translated into real-world financial figures on what it would mean to have a strong ELEP program. In the case that there is none or a weak relationship between the two, the question will be able to answer with a definitive ‘no’ since there are slight benefits at a national level to having a strong ELEP.

Theoretical Framework

To better understand the fundamentals of the competition for English proficiency and how such a large issue might be addressed, this paper uses a theoretical framework that is grounded in an Educational System Behavior theory (Green, 1997). Combined with a pragmatic epistemology due to the quantitative aspects needed in analysis, Green’s theory of Zero

First, it is important to review Green’ Zero Correlation. After an educational system has grown at a uniform rate, and an increasing majority of cohorts have attained an n\textsuperscript{th} level (which is described as any level of educational attainment, for example, a high school diploma) that is offered by the system, there will come a point in time where there is little to no correlation between educational attainment and non-educational social goods, such as coveted high-paying jobs, and similar.

In a system where everyone reaches the n\textsuperscript{th} level, also known as universal attainment, it is the same as no one reaching it; it has become a standard within the system that gives no one an advantage. Green (1997) identifies this point as Zero Correlation. Since there are many levels of attainment being gained by multiple cohorts at any one time, there are multiple points of Zero Correlation happening within society.

To better understand how Zero Correlation affects society, it is useful to think of society as an employer. Like any employer, it requires certain standards or accreditation for any position needed to be filled. As soon as there are many applicants within a cohort with the right educational certificates for the position, it might add to or raise the requirements needed in order to narrow the field of candidates. The result is that these added requirements become the next goal of attainment for a cohort, until a majority has acquired it, whence the bar will be raised again (Green, 1997).

However, before Zero Correlation occurs, there is a period of shifting liabilities that is pertinent to this discussion of what is lost when the majority of individuals do not achieve an
educational standard. Discussed by Green as a corollary of Zero Correlation, the benefits to those who have attained the $n^{th}$ level decline simultaneously as the liabilities to those who have not obtained it rise. This refers to the social and economic repercussions of individuals in the system who have not joined their peers in gaining the level of attainment held by the majority.

To better illustrate this concept of the shift in benefits and liabilities, Green’s visualization of the system will serve well. Looking to Figure 1.0, the diagonal line represents the uniform growth; the pattern of growth of student cohorts over time. Points A, B, and C represent points of Zero Correlations. The thick solid line represents the utility of educational achievements and second order benefits; as each cohort gains in educational attainment, the benefit of it declines. The dotted line represents the magnitude of liability that occurs to those who have not obtained the achievement of their peers.

Figure 1.0 – Replication of Green’s Graph on Shifting Benefits and Liabilities (Green, 1997, p. 98).
Green’s calculations show that these liabilities will only seriously be felt when 40% or more of the population has attained the \( n^{th} \) level. This intensification and increasing liabilities is easily translated into the issue of English language proficiency and attainment in Asia, as those who have better proficiency are given more opportunities than those without. For instance, cities and their denizens, who are known for their proficient use of English and easy interaction with international communities, are more often chosen as sites of regional headquarters over others who are less proficient.

Last, a pragmatic epistemology will guide the research question for an appropriate methodology. This epistemology is chosen due to the way it approaches “practical consequences,…consequences for deliberate, self-controlled conduct” (Pierce, 1905, as cited in Cherryholmes, 1992). It is not committed to any one system of philosophy or reality, rather it is concerned with application of what works and solutions to the problem (Cherryholmes, 1992; Creswell, 2003; Murphy, 1990). Authors such as Patton (1990), Tashakkori and Teddlie (1998) explained that pragmatism directs attention to the question, and how to use mixed methods for gathering understanding and knowledge (Creswell, 2003).

This approach is the most favorable in lieu of the complex nature of the question (it was anticipated that RQ1 would require several stages of both qualitative and quantitative methodology to extract quantitative results). A pragmatic approach lends a researcher the ability to focus on the desired nature of knowledge and use appropriate methodology as needed.

**Placing English Language Policies in Asia into Green’s theoretical framework.**
Discussed previously, globalization and new avenues of trade made their impact on Asian education systems and curricula through English language education. Placing this new language
skill as the next $n^{th}$ level of attainment, it is also represented in Green’s corollary of Zero Correlation: the potential benefit of income and other non-educational social goods, such as better paying jobs, and similar.

As more Asian nations achieve a certain level of English proficiency and become internationally recognized for it, a new standard of proficiency ($n^{th}$ level) slowly becomes the norm. Countries that obtain recognition and begin to use English more frequently are joining others who have been economically prosperous through international trade and similar markets. This is the benefit of obtaining the $n^{th}$ level. A contextual example of this can be seen at the beginning of the millennium, where China, after being named host of the Olympic Games (2008), the Asian games (2010) and gaining admittance into the World Trade Organization (WTO) (2001), began implementing considerably aggressive ELEPs in public schools from 2001. Nunan (2003), who interviewed various ministry officials and similar participants, reported that these events heavily influenced English education policy in China.

On the other end of the spectrum, there are the liabilities. Asian nations who have yet to develop sufficient proficiency within their populations, or even their administrations, have clearly felt the social and economic repercussions. A good example comes from Clayton (2006), who quotes Cambodian officials on the topic of English at ASEAN meetings: “If we don’t know English, how can we participate? We need to know English so that we can defend our interests” (p. 230). Cambodia was the last member to join ASEAN in 1999 and was also second-to-last to implement mandatory English programs in public schools. It might be presumed that if government officials feel the consequences of being linguistically disadvantaged in an official setting, then Cambodians may also feel the effects in social and economic dimensions of a global society in general.
Once the importance of professional skills in the global market place, such as English, is identified, it is easier to recognize how individuals with proficiency impact the national market. For instance, many international finance consulting firms give recommendations on investment in foreign countries. A popular and well known firm is A.T. Kearney, who releases *The A.T. Kearney Global Services Location Index* every few years. The index gives a ranking of the top countries to invest in globally, with “people skills and availability” being a criterion of judgment in their matrix (Gott, 2011, p. 19.). The index of 2011 attributed 17% of the total score to the language skills of the population based on the Test of English as a Foreign Language (TOEFL) scores collected by ETS (J. Gott, personal communication, February 14th, 2014). This large percentage and its ramifications on the ranking scale is just one example of the social and economic benefits that English speaking can bring to a country’s global profile and investment.

**Significance of the Study**

The importance of this study may reach into political, financial, and educational disciplines. By identifying what is gained or lost economically, results have the possibility to give future research or policy decisions justification for implementing or scaling back large and fiscally challenging ELEPs.

Educationally, results can give insight into areas of improvement in language education. An additional result of the study will be comparisons between countries’ ELEPs, contrasting differences in methods, assessment and similar issues. Currently, a majority of countries in the study are in the process of beginning reforms to their ELEPs and have already outlined in their strategic missions (some planned for the next 15 years) the linguistic and 21st Century skills needed in their labor sectors. Countries that display positive growth may demonstrate the
The importance of a structurally sound ELEP rather than over reaching programs that do not have sustainable infrastructure support.

Politically, quantitative data which gives evidence for the economic success or failure of ELEPs would serve both policy and decision makers in future language policy planning. As shown, the politics of a government ideology often accompanies the promise of economic growth and development. However, as will be discussed in Chapter Two, it is often at the cost of cultural heritage and linguistic sovereignty. If the rewards of embedding English as a second language do not outweigh the loss of culture, would politicians still implement aggressive programs? This potential loss of the importance in cultural heritage verges on the greater issue of cultural preservation and the threat to linguistic minorities who would use English as a third or even fourth language. If results show English having a significant effect, the political effect of this study might see classroom policy and curricula shift to English supplanting many minority languages that serve as a link to many student’s cultural heritage.

Economically, once policy makers have leverage through empirical evidence, cases for intensifying or scaling back programs can be made. As shown in the case of the Vietnam 2020 project, the race to compete linguistically is often costly and sometimes too ambitious. Evidence of rates of growth could provide benchmarks for governments in program implementation and provide support on levels of financial commitment decisions in national budgets. Additionally, results could also be utilized at regional levels and give educationally autonomous regions validation for their choices in ELEP implementation. On a negative note, it is predicted that positive results may also encourage reckless spending. Underdeveloped nations might be propelled to use the results for justification of promoting ELEPs that are beyond their current infrastructure supply.
Summary of Introduction

This chapter briefly introduced some historical and contemporary events that led to the rise of the English language becoming the lingua franca in Asia. It also outlined the purposes and research focus of the study, as well as the theoretical framework that will be used with the approach. It concludes with the anticipated importance and uses this study may have.

Chapter Two will review several areas of literature explored in this chapter including: background on theory of the educational system and Green’s theories, Reproduction theory and in particular, Cultural Capital Reproduction Theory (CCRT) by Bordieu, Development through Education, including human capacity building and the growing impact of development on language, the growing field of ‘economics and language’ and econometrics ‘growth theory’, and lastly English’s influence in Asia, including globalization, the history of English in Asia, ‘Circles of English’, ASEAN and the 2015 commitment and the influence of INGOs. Drawing links between the past literature and the research focus, it is hoped that the study will be well supported in its conclusions.
CHAPTER 2. LITERATURE REVIEW

This study and research questions are grounded in broad themes. Therefore, in order to inform the study as well as better understand its influences, literature has been gathered from a wide range of genres and is divided into four sections. First, *Education System Behavior Theory* will review Green’s theories of the foundations of education systems, how they act as employers and how agents’ interests play a role in controlling the system. The second section deals with the possible outcomes of RQ2 and looks to use *Reproduction Theory* and Cultural Capital Reproduction Theory to explain how financial inequalities are present in the context of power structures among countries. The third section, *Development Through Education* will explore the issue of assuring that skills learned through education make an impact on development and therefore the economy. It explores development and human capacity theory, moving to economics and language and previous studies which try to measure English against the economy. Finally, *The Spread of English* explores how English came to gain importance through globalization, hegemonic practices, and current influences such ASEAN, the Organisation for Economic Cooperation and Development (OECD) and The World Bank. These are used to better frame the study’s background and why the issue has gained importance in recent years.

**Education System Behavior Theory**

Exploring further theory that forms the framework of the study, Thomas Green’s 1980 book (using the 1997 Edition) *Predicting the Behavior of the Educational System* provides the primary and only used source. While the study is primarily concerned with his theory of Zero Correlation, and the corollary of shifting benefits and liabilities, it is pertinent to review surrounding foundational theory to have understanding how fluctuations affect movement within
the system. Also reviewed are the roles various agents’ interests play in determining educational needs in society, since they have consequences for the context of English education in Asia.

**System in Motion.** Beginning with Green’s thoughts on the System in Motion, he first notes that the system is more than the sum of its parts. It includes actors (which include everyone from students to society in general), and principles (such as hierarchy), however, while identification of these agents is important, it is more important to understand that the system is the conglomeration of these facets moving interactively and how they move in response to external and internal forces of change. This is what the author means when he says the “System in Motion.”

To reiterate and expand on the Law of Zero Correlation, which refers to the growth of the educational system, it states that there is a point where there begins to be no correlation between educational attainment, such as completing high school and receiving a diploma, and the distribution of non-educational social goods (such as well-paid employment). Recalling Figure 1.0 represented growth of the system and its diagonal line of uniform growth, and Point B at the top of the line which represented the n\textsuperscript{th} level (an attainment to be obtained). A primary purpose of the theory is to raise questions of what will happen in society when the point of Zero Correlation is approached? Green explores these implications, describing them as corollaries.

The first corollary defined by Green is the transformation from educational attainment to educational achievement. By this, he means that attaining the n\textsuperscript{th} level will no longer be as important as to how it was achieved. For example, an employer would place more value on a Bachelor’s degree obtained from an Ivy League University, rather than that from a state funded university. How, or in some cases, where, you obtained the n\textsuperscript{th} level helps to further outline status
and hierarchy within the system. Distribution of social goods is then no longer explained by attainment, but by two other methods. The first is to raise prerequisites for non-educational social goods past the n\textsuperscript{th} level. For example, a person with a Bachelor degree and internship experience would be given higher preference for a job than a person with the same degree but without the internship. A second way they are dispersed is by allocating social goods based on ways of attainment, for example, the quality and status of the school that awarded the degree.

The second corollary of Zero Correlation is “the rule of transforming utility” (p. 95). Green refers to this transformation primarily for second order education goods (such as diplomas, degrees, licenses, etc.) which are primarily used to validate educational benefits gained (such as knowledge and skills). However, as the point of Zero Correlation approaches and more people possess second order educational goods, these benefits transform and lose value against social goods, and are instead become valued chiefly for gaining access to more education.

The fundamentals of the last corollary of shifting benefits and liabilities discussed in Chapter One serve as an introduction. However more is needed, and Green furthered the discussion by giving implications of what these shifts mean in real world application. Developing discussion on liabilities suffered by those who have not obtained a skill, he offers the example of high school drop outs. Explaining that the problem with drop outs is that there are too few rather than too many, Green showed that if there were more, they would experience much less liability as it would become more normal for job seekers to not have a diploma. However, when there are only a small percentage of drop outs, their failure is emphasized and is detrimental to gaining second order social goods relative to attainers.
Green further showed that the value of obtaining the n\textsuperscript{th} level is large (as opposed to prior theory to it having no value once everyone obtains it) by revising his position on the shift of benefits and liabilities. Stating “the idea that the degree of benefit secured by attaining at the n\textsuperscript{th} level is proportional to the magnitude of the disaster incurred by not gaining that level” and the “value of the educational attainment changes” (p. 101). The compulsory nature of educational attainment means that the value of educational and second order educational goods changes over time. Looking to Green’s graph of this change in Figure 2.0, the interaction between benefits and liabilities means their value will change over time in proportion to the percentage of an age cohort attaining a particular system level. The continuing value and interaction between the two demonstrates the social compulsion created when a majority of students have obtained an educational attainment.

![Figure 2.0 – Replication of Green's Graph on Continued Shifting Benefits and Liabilities (Green, 1997, p. 100).](image)
Green elaborated on an important aspect of this interaction. Having a diploma gives no advantage. However, not having one incurs large disadvantages. Students continually strive for educational attainment chiefly to avoid disaster, creating frustration within student populations and dissatisfaction with the educational system and institutions.

The final corollary of the System in Motion pertinent to this study is the Law of Last Entry. Discussing theories of social capital and stratification of socio-economic groups, the law explains that once the n\textsuperscript{th} level is approaching universal attainment, the last group to obtain it will be drawn from the lower socio-economic classes. This theory not only illustrates how the education cycle perpetuates class, but also that the growth of the system is gradual, no cohort leaps from 0\% to 100\% attainment in successive years. Green explains that although there are few reasons to show why this group will be drawn from the lower socio-economic classes, this is how the system behaves, and where concerns of equal educational opportunities often arise.

Corollaries of the law discussed are likely pertinent to this study as of the issues of inequality and deprivation of social rewards. Green discussed that by the time the group of last entry obtains the n\textsuperscript{th} level, those of the same cohort will have already progressed to the next educational attainment to be achieved, meaning that the last group will perpetually be left behind. Second, as soon as the n\textsuperscript{th} level is obtained, the last group, who were likely expecting rewards for their attainment will find that it is now common and does not carry any special weight for non-educational social goods.

The System in Motion theories provided by Green are fundamental to understanding why the educational achievements, such as learning English, are valued at periods of times in some arenas or are seen as common in others. Applying them to the cohort of participants in Asia will
allow the research questions’ conclusions to identify those who are suffering liabilities and those who are reaping the benefits, and how great these are in proportion to the population percentage in each category.

**Interests of Agents.** Finally there are the interests of various parties of the system, for as Green remarks these provide a gateway to discovering who controls the system. Interests determine the development of the system just as they determine what is practical. Interests are never disembodied and can always be tied to a group, however, differentiating who a policy is in the interest of and who has interest in a policy must be carefully distinguished.

As one of the more basic interests, due to the minimal nature of its educational vision, the Interests of the State is divided into compelling and derived. The compelling are: 1) to ensure each of its citizens secures economic independence, and 2) that civil law is obeyed. These are the most rudimentary levels of human concern in a society. Education is under the responsibility of economic independence, giving people the skills they need to become independent of their parents and public welfare. As Green summarized these interests “are minimal in their scope and maximal in their power” (p. 23), meaning that although they are simple, they are essential to society. From these compelling interests comes the derived interest that is concerned with students’ education; to ensure that children are raised and educated in a manner to satisfy these paramount interests. This includes concerns such as who are teaching them, how it is taught, and what is taught.

In minimal alignment with the compelling Interest of the State is the Interest of Parents (all parents want their child to be independent of them and not in jail). However, in conflict is the level of their desire for these basic interests. For the State, it is in their interest that these two
facets be completed on average for the aggregate. Parents however, want the best for their own child and hopefully do not view the fact that their child is independent and not in jail as a success. No parent views equal opportunity as the end goal for their children. Even if they are disadvantaged, they want their child to succeed and have better opportunities than others. Here is where elements of control begin to establish themselves. In actual application, this division of interest levels leads to the rise of private schooling, evaluation and ranking of school systems and schools, and similar. The Interest of Parents controls the system to provide them with more opportunities to better their children and give them a competitive edge for educational benefits and second order education goods. If only the Interest of the State were present, public schools would be the sole provider of education.

As the last interest that is concerned with the study, the Interest of Society is found in the general population. It is more easily identified to think of it as the State without the legal organization and government. Societal interests are broad and classified in many ways. They can be identified as similar to both of those of the State and Parents, but lie somewhere in the middle, as they extend far past minimum requirements of economic independence and civil obedience, but less than that of parents as they are concerned with everyone succeeding and therefore giving equal distribution of educational goods. Broadly speaking, the Interest of Society is to see not only the continuation of itself, but also its improvement.

These interests are better understood by further elaborating on how educational issues are deemed as an improvement to all and then provided with support to be implemented in the educational system, rather than being tied to a particular group. Green uses a formula to try and distinguish how to determine these interests, with “If it can be shown that not everyone benefits from X, then it cannot be justified that everyone should be taxed to support X. On the other hand,
if it can be claimed that everyone benefits from X, then it can be argued also that everyone *can be* called upon to support X” (p. 26).

Under this formula, three primary arguments are made: 1) Everyone benefits by having a portion of educated elite whose skills will contribute to the preservation and good administration of government, 2) everyone benefits from the increase and development of educational goods, which furthers society, and 3) everyone benefits from the dissemination of the minimal skills and manners that people need to function within society. With these claims, societal interests are simplified into being; goods which benefit everyone directly even if their distribution is limited to a few; interests which cannot be for anyone unless they are secured for everyone, such as a well-run government, efficient police force. In short, they are aggregated, rather than given to specific groups, and unconcerned with what is minimally needed by society, but what is good for its improvement.

Applying these interests to the current study, and the context of learning English in Asia, is beneficial to understanding how the influence of the language has transformed English proficiency into an educational attainment. Through the Interests of Parents, as well as the State, control over education systems in Asia via these agents create new markets, policies and curriculum which try to cater to learning English. These theories provided by Green, which forms the study’s framework, are critical in supporting claims that there is inequality and liabilities suffered by those who are not provided with equal educational standards.
Reproduction Theory

Predicting possible results and outcomes of RQ2, positive and statistically significant results might indicate the following scenario: countries with stronger ELEPs are collecting more capital (and assumedly more opportunities since capital comes from the availability of opportunities) than their counterparts with weaker ELEPs. This greater amount of capital and opportunities mean that stronger countries will likely always have greater funding to improve and develop English proficiency among their citizens at higher levels than weaker ones, who struggle to improve due to the lack of capital and opportunities. This division of capital is a cyclical process, meaning that the inequity in lifestyles, and therefore opportunities for learning and improving skills in weaker countries, leads back to a lack of growth and capital. In this situation, theory regarding reproduction of status and how it is maintained throughout generations are turned to for their ability to explain transmission of such forms of capital. For this study, CCRT will be explored.

Exploring its foundations, as a branch of Conflict Theory much of CCRT comes from Marxism with some foundations attributed to theorists of the Frankfurt School, whom had a central value to uncover the social relationships concealed at surface levels. Using Martin Carnoy’s (1982) work exploring Karl Marx’s seminal piece, Capital (2001) and its translation into the context of education, he noted that the Marxian perspective is class based and historical. Carnoy further explored social formations and productions, focusing on capitalist production, and how the amassing and control of capital by those in power produces not only labor, but the working masses themselves. Marx wrote “The capitalist process of production…produces not only commodities, not only surplus value, but it also produces and reproduces the capitalist relation itself: on the one hand the capitalist, on the other the wage-labourer” (Marx, 2001, p.
At a class based perception, Marx (2001) noted that Capitalists have power through social connections and wealth to shape society’s processes and other cultural formations and use them to keep themselves and their successors in similar positions of power. The historical component is introduced when identifying that institutions and individuals are products of prior capitalists shaping society’s processes. From this premise, Marx argued that the capitalist society is structured in the interest of capitalists and those who rule over workers. Reproduction of the power structure comes from selecting leaders from a pool of elites who continue on such techniques of power distribution.

Carnoy explained that more recent Marxian analyses has given the reproduction process greater weight in the “superstructures” (1982, p. 81). Referring to organizations, such as schooling, he notes that this is the most organized form of reproduction of the social classes. “Children go to school at an early age and are systematically inculcated with skills, values, and ideology which fit into the type of economic development suited to continued capitalist control” (1982, p.81). The capitalist form of control creates production labor from schools in addition to accompanying ideology that legitimizes the behavior of the capitalist (viewed as culture). The conflict between the classes, or equality, will never be resolved through universal rules such as the economic system or political rules as these are in favor of the ruling class who created them.

Conflict Theory-based Reproduction Theory focuses on how schooling functions for the benefit of dominant classes, and particularly “how power is used to mediate between schools and in the interest of capital” (Giroux, 1983, p. 76). Rejecting the premise that schools are democratic institutions, reproduction theorists attempted to show that schools reinforce social inequalities while claiming to do the opposite (MacLeod, 2009, p. 11). The work of Bordieu and
Passeron with CCRT appears to be most applicable to the study’s purpose and the possible scenario, and is therefore explored.

**Cultural Capital Reproduction Theory.** To first define Cultural Capital (although Bordieu has noted that it can take three different states, here his embodied definition is used) is seen as the different sets of linguistic and cultural competencies that individuals inherit by way of the class-located boundaries of their families (Bordieu & Passeron, 1977a). In this embodied version as the linguistic and cultural competencies that members of a group hold, reproduction theories have tried to explain how the culture of capitalist societies repeat themselves, focusing on how school culture is legitimized and reproduced.

Bordieu is often credited with conceiving the concept of ‘Cultural Capital’ (MacLeod, 2009), which is the center of his theories regarding reproduction. After noting that the education system is by nature set to reward the cultural capital of dominant class children (such as manners, leadership, being well read, and so on), and consistently devalues that of lower, working class children (such as lack of politeness, docility, limited amount of books read), rewards and penalties (such as better educational opportunities leading to better paying jobs) ensure that each following generation is either granted or denied access to the cultural skills that allow them upward cultural mobility.

However, Bordieu is clear to note that cultural capital does not easily translate to economic capital. While economic capital is directly transferred to the next generation, cultural capital on the other hand can be obtained through familial relations or education. As educational attainment rises, cultural capital passed from parent to child is set to have a decreasing amount of significance. In the context of transferring cultural capital, it is actually the school as an
institution of a capitalist society that decides what it means to be educated, which is the link between the elite and oppression.

Bordieu and Passeron (1977a) used the term “symbolic violence” in order to give some understanding of how this oppression is achieved. It is the “imposition of the meaning system of one group onto that of another” (Feinberg & Soltis, 2009, p. 60). Instead of using forceful and overt economic constraints on the working class, symbolic violence indicated covert exercises of symbolic power by the ruling classes, which translates into the interests of the elites being served and provides them with class control.

The two authors further elucidated how this control is achieved. The first stage is that the ruling classes wield their power to decide what counts as important or meaningful. In the world of education this is as simple as, for instance, deciding what goes into a curriculum, or what education qualifications are important. The next step is that the lower classes buy into these meanings, connecting with them and therefore unknowingly contributing to their own oppression. This leads to the last of central theories espoused by Bordieu and Passeron: habitus.

Habitus refers to the internal dispositions of a person which show their class-based social grammar, behavior, and knowledge, which is permanently etched into their schema and thoughts (Bordieu & Passeron, 1977b). The authors argued that it is this habitus which serves as the bridge between social practices and reproduction. While symbolic violence does not automatically exert itself onto the oppressed (they have to buy into and cooperate with ideology), the circle is completed by habitus, which governs their practices and sets limits and almost dictates what classes buy into.
Exploring how Reproduction Theory and CCRT can be applied to the study of national economies in competition via ELEP will be done in Chapter Five, if a positive and statistically significant relationship is found. However, for now it can be summarized that if there is a system of inequality within Asia via education systems, Bordieu and Passeron’s CCRT will be able to provide insight into how it occurred.

**Development Through Education**

Before discussing how education contributes to economic growth via development, it is essential to first clarify what each term means. Regarding the latter, to quote Huq (1965) “Development implies change in economic, political, and social systems as may be warranted for ensuring optimum use of a country’s resources, human as well as physical, to raise the level of living of the people” (p. 44). This definition is a broad description of the intricate concept that is holistic national development, of which it has been said there is no one singular accepted theory (Cremin & Nakabugo, 2012).

Of late, the notion of development is distinguished into two schools of theory. The first, and longer standing thought has been economic growth will lead to better quality of life (Cremin & Nakabugo, 2012; Arndt, 1987). The second evolves from this and stays true to Huq’s definition in that development should be concerned with meeting human needs beyond economic issues, such as health, inequality, democracy and the like (Cremin & Nakabugo, 2012; Seargeant & Erling, 2013; Thomas & Potter, 1992; Yunus, 1998). Central to this theory is that development is aimed to reduce poverty and calls for increased participation from its constituents in the process (Brathiaux, 2002; Huq, 1965). Regardless of the ideology or perspective, most experts
agreed that education plays a large role in development and is a key factor for success (Williams, 2013; Tilak, 1994).

It is also important to recognize what is meant by growth in an economic perspective. Nobel Prize winner Simon Kuznets developed six characteristics of economic growth that were later built upon by economists. His general definition was: “a long-term rise in capacity to supply increasingly diverse economic goods to its population, this growing capacity based on advancing technology and the institutional and ideological adjustments it demands” (Kuznets, 1973, p. 247). Although this study used a single year of an economic indicator as a variable, a long term study would take Kuznets’ characteristics and definition into account.

How education aids in development has been a subject of many theories. Tilak (1994) provided a concise account of early philosophers and economists on the subject, beginning with Plato who thought education was a requisite for establishing a just state, which in turn made society more sustainable. This paved way for philosophy of the need of education in developed societies. In his late 18th Century book, The Wealth of Nations, economist Adam Smith (2005) established the economic capital of education, adding to the discussion of education’s value in development. Other classical economists of the same era such as David Ricardo, Thomas Malthus and John Stuart Mills credited education with establishing good habits as well as being a motivator for self-improvement and responsibility. Building human capital is emphasized as the most important investment of all and a lack of education exacerbates poverty, making people dissatisfied (Tilak, 1994; Huq, 1965).

Although these economists and others such as Karl Marx (1902), John Stuart Mill (1926), and Alfred Marshall (1920) realized the importance of education to building human capacity, the
late 1950s and early 1960s saw rapid advancement in development models by exploring Human Capital Theory. Nobel Prize winner, Theodore Schultz (1988) led the field with positing humans were resources and their education was an investment (Chattopadhyay, 2012; Haq & Haq, 1998; Huq, 1965; Narkunas, 2005; Psacharopoulos, 1984; Tilak, 1994). To quote Haq and Haq’s (1998) paraphrasing of Schultz and Gary Becker’s (1993) theories, Human Capital can be said to be “…defined as the stock of useful, valuable, and relevant knowledge built up in the process of education and training.” (p.25) It is “the outcome of learning which remains embodied in an individual and manifest in the form of augmentation of productivity of the individual.” (Chattopadhyay, 1998, p.23) This is essentially the skills that individuals take from education and put to use in their labor.

One of the more important advancements in Human Capital Theory of this era was the ability to measure it, concisely defined by Becker (1964) through theoretical and empirical analysis in the form of; “Education> cognitive capacity> higher productivity> earnings> a measure of Human Capital” (as cited in Chattopadhyay, 2012, p. 25). This formula and others which expanded on it gave rise to the rate of return and the production function being used to calculate education and income as an input-output analysis (Psacharopoulos, 1984). This in turn served the greater purpose of calculating how skills and education contributed to economic growth.

Additionally useful to understand and central to this study’s research question is how education and schooling (leading to an increase in Human Capital) contribute to this growth. Although it is supported in part by Human Capital Theory, this is rather the foundation for understanding the conversion of schooling into returns. For this transformation, studies which built upon Becker’s Human Capital formula with econometric models calculating labor and its
returns will be used. Jacob Mincer (1974) was one such economist whose work on education and wage deductions has been a staple of following research models (Card, 1999). Creating a Human Capital Earnings Function (HCEF), Mincer’s formula used an individual’s earnings to be a product of their years of schooling and the number of years since school (or in the lack of data, the potential number of years’ experience, or age) (Stevens & Weale, 2007). His formula is now a staple in studies which use econometric data, with the term “Mincer-like” being used to explain regression scenarios of wage calculation.

In following years, Mincer’s formula was found missing certain elements that accounted for differences in schooling. On a global scale, there were problems with the formula across nations. For example, was a year of education in Japan the same quality as one in South Africa (Hanushek, Jamison, Jaimson & Woessman, 2008)? Moreover, the length of a school year can fluctuate greatly intra-regionally, leading to issues of quality versus quantity. Since then, multiple formulas were created trying to calculate the effects of schooling on income. Some, such as measuring cognitive growth, have led to the promotion of standardized testing on global scales, such as Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS). Other formulas, such as the rate of return and the production function, have tried to simplify it to a cost and return ratio.

While it has been noted that there are validity and reliability issues with each instrument (Bennel, 1996), the results of these studies showed the positive relationship that exists between education and development. Confirming that education contributed to development and therefore economic growth, literature turns to an in-depth examination at how individual skills contribute to the larger picture of education in the economy.
Exploring the focal point of, multilingualism, as one such skill that contributes to the formula. Although the two expressions have the same meaning, in research, the first has been used as a positive term and the latter, a negative. Before looking to prior studies that attempt to calculate the impact of bilingualism on the economy, it would be helpful to first understand the growing impact of language on development.

Recent scholarship on the subject such as Arcand’s (1996; 2013) work on language and development, has remarked it is presumptuous to think language skills have been a large reason for international trade, but recognizes it certainly plays a role in development. Two seminal studies which show a correlation between language and poverty were conducted by Joshua Fishman and Jonathan Pool, whose studies combined form the Fishman-Pool hypothesis on language homogeneity and economic growth.

Fishman’s (1968) study divided linguistically homogenous and heterogeneous countries and compared their socio and economic indicators. His study found that linguistically heterogeneous countries which use multiple languages had higher death rates, higher infant mortality rates, lower Gross National Product, lower educational attainment, and so on. These findings led Fishman to conclude that linguistically homogenous countries had more desirable traits where “primordial ties and passions are under control…and the good life is within reach of a greater proportion of the populace” (Fishman, 1968, p. 60). Pool’s (1972) study correlated GDP with degrees of language heterogeneity of countries. His conclusions were that while “linguistically homogenous countries could be poor, heterogeneous ones could never be rich” (as cited in Nettle, 2000, p. 336). Following research using the study as a model confirms this negative relationship between language and development using similar indicators (Alesina & LaFerrara, 2005; Easterly & Levine, 1997; Lian & Oneal, 1997).
While at face value, these studies seem to be opposing the idea that having a multilingual country is counterproductive for economic growth, they are rather promoting the idea of establishing a lingua franca in addition to minority languages (Pool, 1972; Sberro, 2013). It has also been noted that these studies are primarily conducted by economists, who look for economics based causation and employ anthropological epistemology, which accepts that diversity in society is primarily detrimental and ignores the linguistic facets of the process of communication in society (Arcand, 2013).

Proceeding research (Nettle, 2000, Sachs, 1997) demonstrated that these studies had too simplistic view of causal relations between language fragmentation and economic growth, and interpretation of the results could be multiple. Nettle (2000), for instance, has shown that the Fishman-Pool hypothesis ignored the issue of geography in language heterogeneity, noting that language diversity is not a fixed indicator, but is usually the result of ethnicity, geography and political ideology. The fact that language homogeneity and economic growth have co-evolved does not give significant cause to think that decreasing the diversity of languages leads to economic growth.

From these studies, it could be said that language is tied to economic development; however, the relationship is still to be determined. Moving onto contemporary research that tries to calculate the impact of English in particular on development and first exploring studies which calculate the benefits of speaking English in a domestic setting, might provide some insight into the benefits of the language without the influence of globalization. There have been a prolific amount of studies since the 1970s which study the effects of English speaking immigrants in both foreign and in the U.S. context (Angrist & Lavy, 1997; Chiswick, 1991; Chiswick & Miller, 1995; Kossoudji, 1988; McManus, Gould & Welch, 1983).
Research by Bleakley and Chin (2004) explored the effects of language skills on earnings amongst adult immigrants. The study found that immigrants who moved to the U.S. as children, and learned English in school had higher incomes than those who moved as adults and took English classes. The authors found that by employing the Instrumental Variable (IV) methodology, used students’ age of arrival to the U.S. as their instrument, conclusions showed a correlation between the years of schooling received and the effect that language proficiency had on income. These studies and similar demonstrate the benefits of language skills at an individual level and in a setting removed from issues of development.

Moving onto research which incorporated globalization and attempted to measure the returns of English and its impact on national and individual levels, there have been few that provide conclusive empirical evidence of the relationship between English and the economy. Levinsohn’s (2007) study of South Africa’s’s transition into the global economy after the 1993 apartheid period combined results of two government surveys on labor force and income, using them to make conclusions of the returns of English speaking at individual and demographic levels. Results of an Ordinary Least Squares (OLS) regression showed that there was a positive correlation between income and English speaking for Caucasians. However, results for minorities were difficult to identify because of data reliability issues that did not take into account the differences that policies would have on different ethnicities. This study showed that a relationship between English and economic growth can be found, however, instruments used must incorporate issues of diversity to be fully effective and have validity.

The issue of segregating the influence of English speaking on the economy, mentioned prior, is a problematic issue found in most research. One study which is particularly influential in this research and holds methodology viewed as being the most successful in bypassing issues of
inconsistent and biased data is Arcand and Grin’s (2013) study. Exploring the idea of language fragmentation and English competency on economic development, the authors use data from Acemoglu, Johnson, and Robinson’s 2001 seminal study on colonial mortality rates and combine them with a current language variable (in the form of TOEFL scores, TOEFL refers to an English Language proficiency test that was created and is administered by the ETS) that is run through the IV process. Using the mortality rate data as the instrumental data, TOEFL scores as the independent variable, and GDP per capita as the dependent, the authors ran several variations of the IV and OLS regression. The analysis was expected to create an exogeneous variation between the economic variable and TOEFL scores, showing that economic growth is affected by language fragmentation.

To briefly explore the background and process of the IV instrument, it is considerably new to educational research and has roots in econometrics. It can be traced back to 1928 where researcher Sewall Wright, and ten years later, Henry Schulz, needed to accurately predict the supply and demand quantities in relation to corn and hog prices. Becoming creative with path analysis, they used curve shifters (now called the instrumental variable) to make predictions (Angrist & Krueger, 2001; Goldberger, 1972). Arcand and Grin described the process as more art than science as much of its validity rest on the story telling of the researcher and justification as to why the instrumental variable affects the independent but has no relation to the dependent variable, avoiding endogeneity and skewing results. Since, the approach has become more popular as research has grown and researchers need ways to move around the omission of data or biased sampling. In educational research, the IV approach is most often associated with the use of test scores or education levels and trying to predict student achievement (Akerhielm, 1995; Angrist & Krueger, 1992; Psacharopoulos & Patrinos, 2010; West & Woessmann, 2010).
Looking to its statistical aptitudes, it has the ability to isolate the effect of language on the economy. The common argument for the approach is that the IV is intended to address the issue of unobserved heterogeneity within selected variables. Where common regression models use simple linear regression with two variables to predict future values of the dependent variable, its success rests on the idea that the two variables are close enough in scope (for example; doing your homework leads to good homework grades), that there is little chance for an outside factor to be the real reason of causation. On a larger scale such as a national economy and education, were this study to use OLS and receive a high correlation between the variables, it would be certain that there were other factors influencing results and it could not be certain that researchers were witnessing true causation.

Ultimately, Arcand and Grin (2013) found that English had no special effect on GDP when treated exogenously, it did however, have statistically positive results when used as an endogenous factor. Meaning that their data could only, like other studies, show correlation and not causation. This admission was used as motivation to find more appropriate and statistically relevant variables for the IV approach. A critique of this study could be made in the use of TOEFL scores, which were then multiplied and divided by the population of the country to create the explanatory variable. The TOEFL test is an optional test and has no connection with any government or Educational Ministry.

The first issue with the test is who takes it. As an independent test administered by ETS, not every person who has English abilities will take it. Although it is increasingly becoming a requirement for applicants to enter into higher education institutions in both domestic and foreign settings, or alternatively for job applications, there are other international tests, such as IELTS, which are also accepted for many applications. Therefore, not everyone with English
skills will enter into the log stock of TOEFL. So, on one hand, only people who want to use their English skills (and presumably study hard) are taking the test. On another, not everyone with the desire to speak English is taking the test, opting for others, which score English abilities differently.

Another issue with the TOEFL score is that on average, it cost $175 USD or more to take (ETS, 2014). For example, the price in China to take the TOEFL is $244 USD as of 2012. Considering the location and the average income, these prices are not within reach of a majority of populace who learn English in public schools, creating another issue of access.

While the instrumental variable in Arcand and Grin’s study did not endure robustness tests (detailed results will be further discussed in Chapter Five), the study led the authors to surmise a few lessons. The first was that having a populace be generally competent in English has no association with high levels of economic development. When English was treated as a social factor and combined with other variables, it is no longer associated with economic development or growth. Second, when ethnolinguistic fragmentation is treated as an endogenous variable, linguistic diversity is associated with higher GDP per capita levels. This is a clear change from research explored claiming linguistic homogeneous nations are more successful.

To conclude, this section gives the study security to the research questions’ premise: that education and development are linked. Studies which explored the connection between language and economy have bolstered evidence that there is a relationship between the two. Later studies by Arcand and Grin (2013) and Bleakley and Chin (2004) have attempted to quantify this relationship, however due to data availability and validity issues, have seen few clear results.
The Spread of English

Exploring how English became important is essential for providing a context and will help better inform the study if it finds there is causation between ELEPs and economy. To give a complete picture, it is also vital to understand the liabilities to culture and values that are paired with economic success when a nation places English as the lingua franca. In this manner, issues of power and inequality between nations can be addressed and use literature to make conclusions of the differences in resources and therefore development abilities.

Exploring issues of globalization, Steger (2013) cites the Globalization Research Center at the University of Hawai‘i which identified five variables that indicate the globalization of languages. They are: number of languages spoken; migration; academic context; foreign language learning; and Internet languages. Although some are previously mentioned, these five key variables provided a starting point to demonstrate how English has slowly become the lingua franca for not only trade and technology but also for knowledge creation and its accumulation.

**Number of Languages.** Through 1990 to 2004, the native English speaking population rose from 377 million to 400 million. During the same period, people who use English as a second language rose to 600 million and was expected to double by 2050, outpacing rates of Hindi and Chinese speakers (Cohen & Kennedy, 2007). With roughly 6,000 living languages currently in the world, over a third have been designated as endangered, with less than 1,000 speakers left. The top ten languages of these 6,000 are spoken by over 50% of the global population (Van Parijs, 2000).

This reduction of linguistic diversity is not just a natural phenomenon, such as what might happen with migration and interracial marriages, but is often a concerted effort by
government policies. Phillipson (2008) explored the ability of English as the lingua franca to overwhelm and ‘kill’ minority languages, and supporting policies which are agents of change in promoting language death instead of diversity. Looking to history and colonization practices, Phillipson recalled British colonialism which explicitly strived for monolingualism with the natives of North America, Hawai‘i and even those inside Britain, such as Welsh and Gaelic speakers. These linguicide practices have since ceased with human right laws from the United Nations (U.N.), which allows all citizens to access their culture and therefore linguistic heritage. However, insidious practices in institutions are leaving second language speakers without choice but to conform.

The threat of linguistic death is surprisingly not just an issue for minority languages, but also for official national languages. Longtime advocate and author of language diversity, John Swales (1996), labels English as ‘Lingua Tyrannosaur’ and explored the case of Scandinavian countries who have anxiety in academic and political spheres over the preservation of their national languages. When a language is chosen to be entered into an arena, the native language is perceived to be at risk of domain loss. Legislation passed in France and Poland restricted English use in public domains (Phillipson, 2002). With English being the language of international publications and knowledge creation, these countries feel the “English monster” getting closer. By removing a language from particular areas of society, the vitality of the language is threatened. National policy implemented in Denmark, Norway and Sweden ensured that these languages remain fully operational in all domains of society (Phillipson, 2002). However, Swales reported that calculating the loss of domain is a difficult task due to the terminology and thought that has been assigned to linguistic issues. For instance, as Phillipson (2008) phrased it “domains are not ‘lost’ but are subjected to linguistic capital accumulation by dispossession when the
forces behind an increased use of English marginalize other language” (p. 251). This implies that social and political forces which enforce English use are the real culprit behind linguistic death.

These domain losses can be easily recognized in the context of Asia, where English has long been established in many countries as an official second language, and in some cases is even used in government documents and internal memos. This gives credence to the idea that knowing a second or minority language would be a lesser priority than having English skills, and might influence governments in their hiring practices and similar, which in turn would be reflected in the values that are placed in education.

Migration. The loss of language diversity and the decline of the number of languages, achieved overtly or covertly, is not only encouraged by stagnation of populaces, where English will eventually reach a population, but is also facilitated by population migration. As an issue that involves poverty stricken populations, such as refugees and immigrants, it also concerns the academic elite and skilled workers known for the “brain drain” (according to Rizvi and Lingard (2010) the term “brain drain” was first coined in the 1950s). Migration has long been coupled with social perceptions of financial opportunity; families moving to cities from small rural towns, and educated people leaving their own country to become better paid in a developed one.

Looking first to literature on the poverty stricken, Van Parijs (2000) discussed the issue of migration of individuals and families as immigrants. Noting the stigma that is associated with immigrant languages, these migrants are often placed into compulsory education systems where the national language is forced onto them and assures their linguistic assimilation. This scenario is often found to be the case in the immigration of ethnic minorities, who choose to assimilate under the influence of economic rewards.
While immigrants and refugees are often shunned by developed countries, skilled workers are welcomed. The issue of the migration of skilled workers, who would have otherwise been a boon to their own developing country, has grown to become a worrying trend. Van Parijs (2000) explored OECD documents on the issue that showed statistics on the movement of academics across the globe. For instance, the number of U.S. temporary visas for skilled workers went up from 123,000 in 1992 to 177,000 in 1996. Additionally, they made up to nearly 70% of temporary worker visas throughout the 1990s, while in countries like France, the percentage was much lower, at 15-30%. It was commented on by French authorities that there were 40,000 skilled French in California alone. Other studies done by Shenoy (as cited by Dua, 1994) showed that in India up to 70% of skilled graduates were immigrating to more developed nations in hopes of higher pay and better standards of living.

The alarming rate of skilled workers migrating to developing countries is noted not only by the OECD, but also other INGOs such as The World Bank and others, expressing concern and reporting that a knowledge divide is being created that will delay economic growth in areas where it is most needed (Rivzi & Lingard, 2010). Concern for the future of developing nations is raised on the front of students and academics that study abroad and choose to stay, applying for permanent residency (Dua, 1994; Van Parijs, 2000).

In relation to this study, this issue and literature reviewed has little to do with English language education, and is similar to the issue of the decline in overall number of languages. It does however demonstrate the process a language goes through in order to become a lingua franca and hold a level of importance. Immigrants and skilled workers need to either assimilate or prove self-worth by learning English, possibly losing their own language or forcing future generations to lose their linguistic heritage.
The Academic Context. Higher education and the creation of knowledge have long been under the domain of English. Swales (1987) estimated that over 50% of academic papers written and published were in English. That figure has grown and in 2003, Nunan (2003) claimed that English is now the undisputed champion of scientific journals, science and technology, with many countries now beginning to use the vernacular in English. In some disciplines, such as chemistry, biology and physics, English has become the lingua franca and working language for communication. This claim is supported by our present study and the issue that many foreign countries have begun to teach Mathematics and Science in English in later years of high school.

Publication is an area that particularly dictates the influence of languages. Research done by Ganesan in 1990 (as cited in Dua, 1994) in the context of publishing in India explored the hold that language has over knowledge dissemination. Although only 3% of the population of India was literate in English between 1980 and 1984, over 40% of publications printed were in the language. While citing other similar examples, Dua (1994) contributed this predilection to the desire to be included into the larger body of knowledge and participate in disciplines that use English as their working language. This limits the development of minority and indigenous languages, as well as limiting their access to knowledge published.

At an institutional level, English is used as a gate keeper for entry for foreign students. Jeon (2006) gathered data that showed 75% of the world’s top 100 universities used English as their main language and it therefore plays a pivotal role in knowledge creation, as these are the institutions that students aspire to attend. To even submit an application, foreign language speakers must take costly tests, such as the TOEFL or IELTS to demonstrate their proficiency long before they are accepted.
This proclivity for academic institutions to use English for entry, and disciplines using the language as their primary mode of communication is furthering the demand for ELEPs at lower levels of the education system. For instance, to gain admittance to a University with a good international reputation, students must pass an English test, forcing high schools to administer some level of English tuition. Research from Dua (1994) in particular demonstrated the growth of this influence and how the language has almost become a requisite for gaining upward social mobility.

**Foreign Language Learning.** As the focus of this study, it is essential to review literature on how foreign languages, not limited to English, taught in education systems signal larger globalization issues. Recalling the basics of Green’s (1997) theories of the Education System as an employer, having a symbiotic relationship with the working force and suggesting to society what attainments are necessary for certain employment. As the primary supplier of foreign language learning, education systems respond to the needs and values of the local and global marketplace, based on the perceptions and interests of society and parents. This suggests that any foreign language being widely taught in a school system has been deemed as a skill needed in the future.

This determination of needs and values is confirmed by the history of foreign language education for countries that have transformed their ideologies over the years. For instance, authors Goh and Bang (2004) documented the changes in Vietnam’s foreign language education through the 20th Century. Although Vietnam had significant trade with the British during the early part of the century, French was the main foreign language taught due to French colonialists (who gave up rule in 1954). Some 10 years later, when Soviet ideology and influence reached the communist government, Russian became the main language taught in schools and tertiary
institutions. Finally with the decline of the USSR and Vietnam’s embracing of capitalist practices through Đổi Mới (translating to “Renovation” or “Reconstruction”) in the late 1980s, English education started to grow in schools and universities. By 1999, 98% of students were learning English at schools, with 1.69% learning French and 0.31% learning Russian (Vang, 2004).

At this institutional level, it is not only the choice of language, but also policy choices that indicate how strong it’s global influence. Literature by Nunan (2003) showed that governments have been implementing English Language education at increasingly earlier stages in schools. At this time, every education system in Asia, with the exclusion of Indonesia, now teaches English no later than Grade 5 (Kam & Wong, 2004). However, it is reported that this implementation is often without adequate funding, teacher training, and development of curricula, etc. (Nunan, 2003). This race to create English speakers without adequate resources is a central theme surrounding our study, one that indicates whether governments have a strong or weak ELEP which dictates the proficiency of their students.

Last to be discussed is how the value placed on a foreign language by individuals signals its importance. Nunan (2003) and Jeon (2006) used the example of Korean parents, who spend enormous amounts of money on their children’s English education. Nunan reported that up to one third of their income is usually spent on a child’s private lessons, which includes English, art and music tuition. Jeon reported that these numbers add up to 14.3 trillion Korean Won (approximately $13 billion USD) in 2005 being spent on private English lessons alone. Include the 700 billion Korean Won ($663 million USD) spent on taking English tests such as TOEFL and the total adds up to 1.9% of the GDP for 2005. Korean parents are an extreme example due to the greater amount of disposable income they possess in comparison to other countries in the
region. Regardless, this level of investment is indicative of the importance parents place on English for their children’s future.

**Internet Languages.** As noted earlier, the invention of the Internet and modern technologies aided the dissemination of knowledge, and bridged global divides (Zughoul, 2003). When trying to identify how languages (and English in particular) become globalized, languages used in media which disseminate knowledge, like the Internet, assist in determining which language is important. Since ICT was the invention of Western countries using English, it naturally played a large part in its growth since the 1980s (Steger, 2013). Authors Luke, Luke, and Graham (2007) provided a synopsis of research from literature by Crystal (1987) and the British Broadcasting Company (BBC) (2001) surveys which documented language of Internet use since its creation. As noted by Crystal, over 20 years ago two-thirds of scientist used English to write approximately 75% of the world’s emails, with over 80% of all data stored being in English. Move forward to 2001, and 90% of all computer connections on Earth are to homes with English as their main language.

In an educational setting, the teaching of ICT skills in schools is becoming more intertwined with the English language, with many countries now spending a portion of class time teaching ICT in English, as is done with Mathematics and Science (Law, 2004; Zughoul, 2003). Law (2004) reported on ICT and English language education planning in Hong Kong and Taiwan, where developments in ICT have made English proficiency seem more pertinent to future employment. He also noted that while ICT use via English has been promoted, it also has created inequality amongst rural and urban schools. In a rural setting, there are larger numbers of ethnic minorities who use English as a third language for Internet use, only if the school is fortunate to have Internet access. Law raised an important issue in regards to internet use and
how languages become dominant through the medium and how linguistic minorities are disadvantaged, a topic explored further in the next few paragraphs.

Now that literature has identified how a language becomes globalized through various influences and practices have been scrutinized, literature exploring the example of English in Asia is reviewed. However, before beginning to explore literature explaining how English moved its way into Asia and into a position of prominence, criticism of such a position is examined.

**Circles of English and Hegemony.** In 1988, author on World Englishes, Braj Kachru, created the now well-known Circles of English model. The theory was made to explain the positions of power that are held by English native speaking countries and the authority they hold over others in acquisition of English. Designated into Native Speakers (NS) and Non-Native Speakers (NNS), there are three concentric circles in the model. The Inner Circle consists of NS countries such as the U.S., the U.K., and Australia, etc. These countries are characterized for their native accents (which others try to mimic), the ability to learn English for free, and having little interest or incentive to learn foreign languages.

Outer Circle countries are those who have colonial ties with English, such as India or Singapore. They are characterized as countries which use English as their second language and practice it in government institutions or structures to certain degrees. Literature reported that these countries are in a position of submission, where issues like strong accents, imperfect grammar and the like are exposed to make them feel hesitant and embarrassed to use English with NS (Matsuda, 2003). Finally, the Expanding Circle refers to countries that are new to English and classify it as a foreign language, such as China, Brazil and Russia. These are more numerous than the Outer and Inner circle countries.
In the model, the members of the Inner Circle are seen to generate the rules for language learning, which affects the Expanding Circle greatest. As noted by Kachru (1998) NS of the Inner Circle are greatly outnumbered by those in the Outer Circle alone, for example the Asian continent has the largest number of English speakers in the world (Cheng, 2013). However, the Outer Circle, which has a semi-proficient command of the language is not subject to the rules of the language and are able to incorporate them into their own (Friedrich, 2000). This created new forms and dialects of English, such as Singlish (Singaporean and English), and code switching (the ability for speakers to move between languages) to become the norm for English learners. These facts recently challenged the concept of who is a NS now that the integrity and functionality of the language is changing and is validated by language professionals (Nero, 2000).

This model and following literature (Look to Bhatt, 2000; Matsuda, 2003; Nero, 2000) may serve to inform conclusions on why there are discrepancies between Asian nations ELEPs, and if a relationship is found, perhaps what are the economic benefits of a strong ELEP. At first glance, there are former British protectorates such as Hong Kong, Singapore and Brunei, all in the Outer Circle, who are well known for their economic success and have a long history of English. However, there are also countries such as Myanmar and Fiji, also former British colonies who are considered developing nations. Searching for reasoning beyond the ELEP and statistical analysis is beyond the scope of this study, but has potential to inform future studies which incorporate variables of ethnicity and historical colonial ties into language models.

Literature on English’s hegemony is extensive, and it is far beyond the ability of this study to analyze all aspects of the genre. However, drawing upon literature which formed a connection with the study’s issues of economic development and the pursuit of language learning
will assist in understanding why the race for proficiency has continued for over 30 years, and perhaps why some countries may always remain behind.

Cheng (2012) noted that English did not become a global lingua franca because of its linguistic features, but rather because of the power wielded by its native speakers. This is confirmed by literature already examined, exploring the worlds of academic publishing, the internet, political ideologies, and so on. This power dynamic has led to issues of neocolonialism, inequality, social stratification, linguistic imperialism, language death, to emerge as concerns of English’s hegemonic practices. Guo and Beckett (2007) gave an extensive review of these issues and noted that while English is empowering to learn, its increasing influence furthers racism through language and gives more power to the powerful, while the disadvantaged are left farther behind.

Beginning with the issue of a student’s choice to learn English, there has been much debate whether one even exists. Students as part of a future workforce might be offered opportunities to learn other foreign languages in their schooling; however, as seen in the Outer Circle countries, English is already part of everyday society, being used in domains such as government. The literature (Bamgbose, 2003; Pennycook, 1994) explored the constraints placed on students’ choices which demonstrate that English is inevitable. With English becoming “part and parcel of daily life” (Fishman, 1996, p. 639), and the role it plays in connecting speakers of multiple countries, students and the population in general have little option in requiring access to English (Pennycook, 1994). It is furthered constrained by the economic command that it holds over employment, making learning minority languages, which hold little promise of being rewarded as well as English, particularly difficult to encourage in schools and with parents who have hope for their offspring’s economic success.
The interests of parents, explored in Green’s theory of the Education System, and their role as consumers is another facet that perpetuates English’s power in foreign domains and maintains it as a social elite trait. As described by Tollefson (2000) and Bamgbose (2003) in Outer and Expanding Circle countries, where English is most often acquired through education, parents, as seen in the case of Korean parents, spend large sums to acquire English. This leads to issues of social stratification; only parents in the higher socio-economic stratum can afford to send their children to private schools, who pay English NS (the best source of English learning) to teach. These educational elite, who have greater proficiency, are given better chances at well-paid jobs and therefore English is reproduced throughout the generations as positions of power (Dua, 1994).

National policies on language planning are of course also present in the discourse and literature of keeping English and its users in positions of power. Policy decisions of language use are made by politicians, who are often from the educational elite and are greater served by keeping English use important (Rubagumya, 1991). Investigating who creates policies to be passed into legislation is a critical part of exploring power structures of English and elitism (Cooper, 1989, as cited by Bamgbose, 2003). Since the majority of consumers of policy are those who have little input in them, policies made usually favor those who have input, and since the policy makers are usually drawn from the elite ranks, there is “a situation in which policy and practice are self-reinforcing and the entrenchment of a self-perpetuating social class” (Bamgbose, 2003). This means that policies which control working classes are never in their favor.

In relation to this study of how an ELEP affects an economy, these issues address the portion of people who are segregated from the elite. Most likely the elite of foreign countries
have little to do with English programs that are taking place in government schools (the subject of this study), benefitting instead from private education. Accounting for this lack of participation, the issue can be repositioned from that of the individual level to one of the continent. Many nationalities in Asia are known for their wealth and resource-rich education systems. Countries whose governments can afford to heavily invest in public education are likely to benefit from keeping English in a position of need, as demonstrated by the A.T Kearney Report when recommending countries for Foreign Direct Investment. Policy decisions favoring English use made by these countries placed them at a competitive edge over others, which renews the cycle of power as mentioned by Dua (1994).

**The History of English in Asia.** The spread of English across the globe is older than the modern era of globalization, and stems from the early days of British colonialism in the 16th Century (Steger, 2013). Looking specifically at the Asian continent, most countries had contact with English through missionaries or colonization/protectorate roles as early as the 17th Century. While some were colonized by other countries and learned other languages, such as French and Portuguese, by the 19th Century, most had dealings with English speakers through trade.

Missionaries are largely responsible for most beginnings of formal English education in Asia and in some cases, schooling itself, or least a Westernized style of schooling (Guo & Beckett, 2007). Creating schools, British and English speaking Missionaries viewed the language as essential to understanding the word of God, and therefore taught it as the language of instruction in most cases (Lotherington, 1998). There are numerous examples of government disruptions or changes to education systems (See Yang, 2000) which, when not approved of by parents, would see an increase in enrollment at missionary schools. Parents felt that a Western education and English language was more beneficial than what the government could currently
offer (Look to Sweeting & Vicker, 2005; Yang, 2000 for the example of Hong Kong schools). As they moved into the 20th Century, many of these schools were adopted into government systems, but still allowed to keep their style of teaching and English medium.

While Missionaries brought the first wave of English education, it was colonization and the roles of protectorate that expanded its use through Asia and the Pacific. Authors Bray and Lee (1993) provided general description of colonial practices of education, stating that they largely began with these Christian missionaries, and although they were considered for the elite, were aimed at keeping the local population under control with teaching labor practices and stifling thoughts of democracy.

Through these periods of colonization, English went through various stages of importance. At first reserved for the native-speaking upper class, then disseminated as it grew in use in government structures, the slow linguistic dispersal of a colonial language has coined the term *linguistic imperialism*. Developed by authors such as Gilbert Ansre (1979), Kachru (1985), Phillipson (1992), and explored further by Boyle (1997), it is defined as a colonial language dominating a native population “to the point where they believe they can and should use only that foreign language when it comes to transactions dealing with the more advanced aspects of life such as education, philosophy, literature, government, the administration of justice etc.” (Boyle, 1997 quoting Ansre, 1979: 12–13) Meaning there is a clear linguistic dominance of the invading language.

The stages of such a process is succinctly defined by Boyle (1997) who drew upon Phillipson’s (1992) and Galtung’s (1980) thoughts on imperialism in general. The first stage of early colonialism involved compulsive practices of the colonizers over the natives. Described by
Phillipson as the ‘stick’ stage, it is marked by coercion and displacement of local languages and native structures. Early practices also included colonizers selecting elite members from the population for special opportunities in schooling and society. Often these members are sent to the colonizing country for their education. Once the elite are proficient in the language and are working with the conquerors, they replaced the colonizers, being chosen for positions of power and influence over policy and marking the second stage of linguistic imperialism. At this stage, referred to as the ‘carrot’, the colonizing language is seen to be a characteristic of the elite, and as such the larger population is beginning to strive for its proficiency as it is seen as a skill to gain social and economic capital. During this stage, international corporations begin to insert themselves into local markets, using the colonizing language for communication and bringing an influx of new wealth, supporting local ideas of the colonizing language being an opportunity for success.

By the last stage of linguistic imperialism, the physical presence of the colonialist is no longer required to maintain superiority of influence; it is supported by technology and the colonialist ideology’s presence in the country. Known as the ‘ideological’ stage, it is signaled by covert control over the nation. This model of linguistic imperialism is consistent with literature previously explored, such as Kachru’s Circles of English and various literature on how a language becomes globalized. For a contextual example, look to the situation of Hong Kong and Britain as described by Boyle (1997) and Sweeting (2007) or the Philippines and America by Bresnahan (1979).

Bray and Lee (1993) defined decolonialization as “a process leading to the conclusion of direct colonial rule” (p. 542). For British colonialism in Asia, Africa and the Pacific, it is signaled by colonialists readying the population for independence and taking control of a
democratic government. In many instances of decolonialism, the transfer of power often went from one elite (the colonizer) to another (the native elite), and as such rarely did structures or values placed in the education system change (Bray & Lee, 1993). An example of this can be seen in the case of Hong Kong’s education system.

It is reasonable to question the fact that if most countries within Asia went through a process of decolonization, why has the power and perception of English as an elite characteristic remained? First taking Rizvi and Lingard’s (2010) definition of a social imaginary as “a way of thinking shared in a society by ordinary people, the common understandings that make everyday practices possible, giving them sense and legitimacy” (p. 34). A social imaginary is also included in ideologies and policies that are practiced in a society. In addition to practices that have been legitimizing English (ICT, academic context, and others), this social imaginary may explain why ideologies and practices established by colonizers have persisted in many of the former colonies. Although some tried to establish a reversion to their own linguistic practices, such as the case of Malaysia and the Malay language (Look to Guan, 2007), all have seen a resurgence of English language taught in schools due to a demanding public and global market.

Contemporary Influences. Exploring how English was established and remained in Asia, it is now prudent to look at contemporary influences for its continued practice and how the last 20 years in particular, has had a surge of English Language education within the region. Beginning with internal agencies then shifting to INGOs, the case of ASEAN will first be explored.

Author Andy Kirkpatrick’s book English as a Lingua Franca in ASEAN; A Multilingual Model (2010) provided an extensive review of the choices of ASEAN in regards to English and
how such choices would look for members’ policy decisions. Established in 1967 with only five of the ten current members, ASEAN was created out of anxiety that newly decolonized countries and those dealing with issues such as communism, war, and cultural divide would devolve and create regional instability. Although the working language of the association is not mentioned in the original charter, English was automatically assumed for the role.

As the association grew in members, authority and power, ministers and officials who were less than proficient in English than others noticed they were losing ground on issues concerning their nation’s success. Kirkpatrick (2010) quotes Thambipillai (1992) who commented that in official meetings, Singaporeans have better negotiating tactics in English and therefore have an advantage. This is consistent with Clayton’s (2006) earlier example of Cambodian’s concern over their lack of proficiency affecting their national interest. As membership grew, there have been multiple requests for ASEAN to consider adopting other languages, such as French (Vietnam’s request) and Malay (Malaysia’s request), both which have been denied.

While the new charter created and signed in 2009 officially established English as the working language, arguably the largest development of ASEAN’s relationship with English has been in the 2015 AEC guidelines establishing it as the language of business (ASEAN, n.d.). Being asserted as the language of business for ASEAN members, while in line with creating a single market for the region, it was perhaps not unexpected as member states have been increasing their English education capacity for some time. Unfortunately, little research has been completed on the direct effect the AEC guidelines are having on member states’ ELEP. It is expected once the AEC is in effect, analysis will start to emerge on the various countries abilities to engage with this requirement.
Of course there are other agencies that are both a result of and an influence on English use and by relation education. The first discussed will be the Asia-Pacific Economic Cooperation (APEC), who in 2003, issued a statement which encouraged English education amongst its members; stating its importance in the role of diplomacy and trade (Lazaro & Medalla, 2004). To encourage it as a working language for trade, APEC’s Human Resource Development Working Group was tasked with identifying priority areas in need of attention.

Perhaps though, the utmost influence on English education comes from global organizations, such as the OECD, the World Bank, the International Monetary Fund (IMF) and the WTO, to name a few. With regards to the focus of how these organizations perpetuate English language education within Asia, their missions of developing nations and economies through trade and international cooperation can be examined. It has been noted by Rizvi and Lingard (2010) that these organizations have ideologies of neoliberal economic globalization at the core of their practices. Such ideologies propagate educational practices which are intertwined with human capacity building for economic growth, and as such, focus on skills that further fiscal rewards, such as the promise that is partnered with English skills.

Practices by these INGOs have been suggested to encourage neo-liberal ideologies within developing nations (Rizvi & Lingard, 2010; Tikly, 2001). As such, there has been much criticism in regards to hidden agendas of such organizations to perpetuate social and economic capital among the elite. As major policy players, these supranational organizations influence national education and social policy, such as curriculum, benchmarking practices, and so on, which address economic issues. Such INGOs, which play the role of facilitators of knowledge and financial donors, have created “imperatives of the global economy” (Rizvi & Lingard, 2010) for education systems. Criticism stems from concerns that these imperatives are more concerned
with global rather than local needs, a situation which arose naturally with globalization and international comparisons.

**Summary of the Literature**

In summary, the literature reviewed attempted to bridge the large divide between educational theory, to its application within society and development, and finally to the context of English in Asia. Green’s theory of the system provided understanding of how the demand for English is both created, through interest and therefore control by parents and society, and how once obtained becomes either a benefit or a liability for those within the system. CCRT, using primarily the work of Bordieu and Passeron assists in placing potential research findings in a context to show what role they play in power relations between countries. Development through Education explored the positive relationship between development and skills learned through education, ensuring a strong foundation before reviewing studies regarding how English contributes to the economy. Providing a context for these studies was the history and position of English in Asia. Looking to hegemonic practices, colonialization issues, and social imaginaries to understand how issues of inequality might surface within results of the study, and how they can be contributed to facets of educational liabilities, national development and eradication of poverty and oppressive practices of INGOs.

Throughout the literature, the theme of inequality is constant and it would be helpful for later analysis to draw it forth and apply to this study. The first encounter arises in educational attainment and the repercussions felt through non-educational social goods because of inequality in attainment. As shown in Green’s theory, the interests’ of parents control of the system to expand and provide them with schooling options gives their children better educational benefits
(such as better English proficiency), leading to better non-educational social goods (such as higher paying jobs and opportunities for positions of power and influence). Applying this with Bordieu and Passeron’s CCRT work at a macro scale and treating countries like individuals or classes, with levels of English proficiency being recognized on a national scale, specific countries become known for their levels of human capital and abilities and are favored with more opportunities for development and economic growth by the international market. While for those who are not attaining educational benefits and suffer resulting liabilities, the loss of these opportunities potentially means that they will never have enough capital to become equal with their competitors. Within Asia, hegemonic practices that perpetuate this inequality stem from historical ties and contemporary practices of Inner Circle countries and INGOs that favor English speakers as a result of reasons behind linguistic globalization.

However, while English speaking and its effect to globalize a nation is thought to be an educational attainment that provides better non-educational social goods and opportunities, as reviewed in Development Through Education, few studies have been carried out in a foreign speaker setting that convincingly establish a statistically positive relationship. This study therefore hopes to fill the gap and contribute to understanding whether English adds to economic growth and therefore inequality among nations.
CHAPTER 3. METHODOLOGY

This study examines the financial effect of ELEPs on Asian economies using publicly available and constructed data. This chapter will begin by explaining the rationale for the analytical approach used, followed by discussion of the IV process, and the construction and data used for the variables. It will then explore the technical process for administering the instrument and variables, and finishes with looking to the limitations of the approach and data.

Rationale and Design

The pragmatic epistemology chosen has proclivity for empirical research: applying this approach to RQ1 led to a consideration of several quantitative methods; however, few methods produced satisfactory empirical evidence in previous research. The Arcand and Grin (2013) study however, is similar in goals, and considering their data could be criticized for having confounding effects with the TOEFL scores (which might be remedied with another data source), this indicated that IV approach would be the most suitable instrument. Although not a ‘perfect’ method, as it relies on the strength of the researcher’s argument for inclusion of the instrumental variable to adjust the relationship between one or more independent variables and dependent variable, it has the advantage of being relatively easy to implement and flexible in adjusting the relationships between key predictors and the Y outcome for unknown or omitted causes.

To first define phrases and meanings used. Endogenous (and its various forms) refers to variables that are correlated (known or unknown) with each other and with the error term. Exogenous (and its various forms) therefore refers to variables uncorrelated with each other and the error term. The acronym “IV” refers to the process and analysis in general, while “instrumental variable” refers to the data used within the process.
**The IV Approach.** In observational studies, instruments must take into account a host of observed and unobserved variables if a hypothesized construct’s results are to have any validity or reliability. The IV approach is used to control for such unknown or omitted variables that might influence a dependent ($Y$) and independent ($X$) variable under study, by allowing researchers to suggest a third observable covariate exists (known as the instrumental variable or $Z$) that affects their independent variable, but is uncorrelated with the dependent variable. By regressing the third covariate on the independent variable, potential measurement error is removed as well as an exogeneous variation created within the independent variable. This will give an estimate of the causal relationship (rather than simple correlation) when the independent and dependent variable are regressed. For policy studies and analysis, where targets of study need to overcome omitted variable issues, and where there might be a difference between theory and collected data (measurement error), the IV approach is useful for narrowing the causal relationship.

**Primary Assumptions.** In order for the IV approach to be successful, two primary assumptions need to be satisfied: Instrument Exogenism and Instrument Relevance. Instrument Exogenism refers to the concept that the instrumental variable ($Z$) and the final dependent variable ($Y$) should have little correlation between one another. Variable $Z$ must only have an effect on $Y$ through the Explanatory Variable $X$, meaning that $Z$ must have no direct or observable influence on $Y$. A Pearson correlation test will show the amount of this influence present between the exogenous predictor $Z$ and the $Y$ outcome. For an instrument to be considered exogenous, or have little to no correlation or endogeneity, it should have what is considered “weak-correlation” (i.e., $r=0.0$ to .3).
Instrument relevance indicates that Z must have a causal effect on X shown in the final regression output. Determining if the instrument is relevant, are rather, asking if the relationship between Z and X is significant can be determined by looking at the regression results, in particular, the coefficient’s $p$-value’s and the size of the standardized regression coefficients. If significance level is lower than the adopted significance level, then we can reject the null hypothesis and accept the alternative that the correlation between Z and X is not 0.0.

In this study, there is a smaller data set than what is considered to be the optimal amount for statistical analysis. Because the number of countries comprising the sample ($N = 19$) is relatively small for optimal analysis, $p$-values and corresponding confidence intervals surrounding model estimates need to be adjusted to match the limited sample size. A sample size of 30 is traditionally viewed as the minimal sample size where variable distributions and relationships between variables tend to normalize. With a sample size of only 19, the statistical relationships in this study may not be as likely observed at the traditional significance level of $p < .05$, which is commonly adopted in studies with larger samples.

As Noymer (2008) notes “A significance level of 0.05 is conventionally used in the social sciences; however, probability levels of 0.10 may be used in studies with small samples” (p.19). He goes on to suggest that standard errors will occur larger in smaller data sets and, therefore, parameters must be readjusted to accommodate such issues. Therefore, in this study, a $p$-value of 0.1 was considered the threshold for considering whether to reject the null hypothesis.

When interpreting whether data is statistically significant, there is also a case to be made for creating a confidence interval bracket around the coefficient to determine a range of possible estimates that would fall within a statistically significant range above and below the obtained
sample estimate. As Allison (1999) indicated, this can be accomplished by using the t-value for 18 degrees of freedom (due to the sample size of 19) with 0.1 confidence level and multiplying it by the coefficient’s standard error. Taking this amount and adding and subtracting it from the unstandardized coefficient create 2 estimates that serve as the range of possible values, or bracket, surrounding the estimate. As long as the lower value remains above 0, the effect will be considered significant.

Regarding effect sizes, Coolidge (2013) makes the case using variance accounted for in the outcome (or \( R^2 \)) and settling for smaller values. The corresponding \( R^2 \) effect sizes for a small (.01), medium (0.3) and large (0.5) correlations are 0.01, 0.09, and 0.25. These effects sizes provide a useful way of thinking about the strength of the effects between the variable in the model and will be used when considering if the data is a good fit in interpreting results.

The three variables in the proposed model, which are fully explained later are: 1) the constructed language variable which represents the scoring of ELEPs, serves as the independent \((X)\), 2) an economic variable \((Y)\) serves as the dependent, and 3) the year of ELEP entry \((YOE)\) serves as the instrumental variable \((Z)\). The first stage in applying the IV approach in this study is to use the YOE variable to create an exogenous effect on the language variable. The language variable is regressed on YOE, providing a new predicted value that is saved in the data set. This predicted estimate by definition cannot be an effect of the economic variable (since it represents the effect of YOE on the language variable \(X\)). The economic variable \((Y)\) is then regressed on this new saved \(X\) variable at the second stage of the model estimation. This is how we ensure a greater chance of witnessing true causation, unlike what might be encountered with OLS regression. This process of adjusting the \(X\) variable and then estimating its effect on \(Y\) is also referred to as two stage least squares regression (2SLS).
Because data used to test the proposed model are obtained from publicly available government documents and previously collected demographic data sets, this study was exempt from the Institutional Review Board process. It did not require interaction with human subjects, and used only existing summary data from participating countries.

Data

Data Sources

Language Variable. Countries chosen to participate in the study were based on their geographical location of Asia – Pacific. A country was excluded if it was determined that its data could not be adequately accessed for a reliable representation (e.g., relatively complete data and judged to be accurate). A noticeable example of this is for Myanmar, where one piece of curriculum could be found, but not enough of what would be considered a full picture of its ELEPs. Therefore, instead of including the country’s partial data and receiving an inaccurate estimate, potentially skewing results, the country was omitted.

As noted previously, many of the ELEPs for individual countries were obtained from the country’s Ministry of Education online website. When an official curriculum and teaching manual was not available from the official site, they were obtained from other sites, such as research centers, and similar. When official English translations were not available, data from secondary sources, such as United Nation Education, Society and Culture Oranganization’s (UNESCO) online data repository and scholarly literature were used to corroborate information gathered. In addition, literary authors were often used to confirm or strengthen information gained from secondary sources, as well as UNESCO’s Data on World Education (6th and 7th
Editions; UNESCO, 2006; 2010) were used for any insights. There were many instances, where a country’s ELEP score was put together from various sources.

National demographic data, such as the Mean Years of Schooling was taken from Barro and Lee’s database (2005). However, if the database had missing data (as in the case of Taiwan and Samoa) the UNESCO’s United Nations Institute of Statistics (UIS) or the country’s Ministry of Education was consulted for their Educational Statistics, and the mean estimate was used from documents which provided dropout and enrollment rates. Additionally, data for classroom sizes was taken from UIS, where the average class size over the time frame of 2005 to 2014 was calculated and used.

**Economic Variable.** Data was sourced from the IMF (IMF, 2014) as this had the most recent data and full set (October, 2014), and is formatted into 2005 USD. Taiwan’s GDP PPP per capita in USD had to be sourced from their Ministry of Finance’s website.

**Instrumental Variable.** Sources for this data most often came from historical literature and scholars found both online and in print, who write about the history of education in particular countries. There were no curricula that could be accessed remotely, online or in print from these early periods. In cases where the wording of literature was ambiguous, supplemental sources, such as scholarly articles were used to corroborate the year.

**Data Preparation.** Regarding the language variable, policy documents, curriculums and syllabi were analyzed using Norman Fairclough’s methodology of textual discourse analysis (2010). Using *Analysing Discourse: Textual Analysis for Social Research*, methods outlined have been geared towards researchers in social studies, and navigates discourse analysis in a linguistic context, i.e. word choice, prose, grammar, etc., and the social implications and
subsequent analysis of the written word. Fairclough draws on Halliday (1978; 1994) with Systemic Functional Linguistics, which approaches discourse analysis as a way to view the relationship between language and society/social phenomena.

Fairclough’s (2010) methodology incorporates ideological themes, social structure consideration, and the like in cooperation with textual analysis, creating the link between the purpose of a text and transmission of intent to the reader. When approaching the analysis itself, he divides social purpose into events (Action, Identification, and Representation), then looks to genres, discourses and styles, which are further analyzed for semantics, vocabulary, grammar and so on.

Once data for a country’s curriculum were collocated, a rubric was created for processing data in collaboration with Fairclough’s (2010) methods and giving each country its score which would be used as the final language variable. The scoring rubric (Found in Appendix A) was created by analyzing contemporary literature and research on best practices in second language teaching. The choice of these facets to be included in assessing ELEP was taken from Liddicoat and Scarino (2013) recent work on evaluating Language Programs. Some of these aspects were later omitted due to the issue that there was overlap between measurements.

Validity of the rubric was established by administering it to three test participants. The participants were given the same curriculum, with their scores and feedback helping to further define the rubric. After the first round of feedback, the rubric was administered to 2 new participants with results narrowing to a 0.2 difference in scores. This discrepancy was chosen as an insignificant level of variance in the final scores. See Table 3.1 for the raw data of ELEP scores.
Variables in the Model

**Language Variable.** In order to assess whether national economies are influenced by the ELEP administered to the population, ELEPs in their raw form of government policies and government issued curricula are assessed, as well as demographic data which indicates levels of participation in the government ELEP. Data from 19 countries around Asia and the Pacific were collected in the form of official government documents, curriculum outline and syllabi of ELEPs and INGO demographic data. An issue considered when deciding on data and countries to be used was the one of time for implementation and effect. Policies take time to implement and even longer for the affected cohort to make their way into the workforce. For this reason, instead of using up-to-date policies, policies enacted in the past with calculations when the earliest cohort would enter the workforce were used. If calculating for a developed nation, 20 years would easily be considered the amount of time necessary for elementary school children to enter into the workforce. However, using the Barro and Lee database (2010) the average amount of years schooling for countries under the study is 8.3 years. For this reason, ELEPs that were enacted in 2005 (or as close as possible) were collected in order to use against economic data in 2014.

Data in the variable include; 1) Mean years of schooling. This facet refers to the average amount of years children are likely to have. This data was taken from the Barro and Lee (2014) dataset, by taking data for people aged 15 and over for 2005 and 2010, and creating an average. In the case that a country was not present in this data set, other statistical data sets, such as the UNESCO’s UIS was looked to. If this failed to provide any data, the country’s own Ministry of Education and National Statistics were sought and the Mean Years of Schooling formula was applied to the country’s educational statistics.
2) Teacher Training. This facet consisted of using the “Teaching Staff” portion of UNESCO’s 2005 World Data on Education documents (UNESCO, 2005). By taking the reported years required for teacher training in the country, a score was given based on the rubric. 3), Elementary Class Size and 4) Secondary Class Size. Using UNESCO’s UIS database on the reported amount of students in a class, an average score from the years between 2005 and the latest year available was constructed (UNESCO, 2005).

5) Teaching Methodology. Judging the English curricula/syllabi itself, the methodology portion refers to the way English skills are taught, whether through the more contemporary communicative approach or through the less favored grammar-translation method. In some cases, curriculums did not specifically state methods teacher are to use. In these instances, looking to the practices given in examples, in addition with the content (heavy grammar base, or speaking/listening, etc.) was able to help give an indication of likely methodology employed. The validity of this facet is further discussed in Appendix B.

6) Curriculum Content. Again using the curricula/syllabi, Content refers to what is taught in the English classroom, whether students are being prepared for communicative competence and using the 5 skills, or if there is a heavy emphasis on grammar and reading, indicating students would have limited abilities. A more comprehensive explanation of the variables and their scoring can be found in Appendix A. These raw scores can be viewed below in Table 3.1.
### Table 3.1

*Countries’ Raw ELEP Scores*

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean Years</th>
<th>Teacher Training</th>
<th>Element. Class Size</th>
<th>Second. Class Size</th>
<th>Teaching Method</th>
<th>Curricul. Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>7.00</td>
<td>4.00</td>
<td>3.20</td>
<td>6.00</td>
<td>2.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Brunei</td>
<td>8.70</td>
<td>4.50</td>
<td>5.00</td>
<td>10.00</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Cambodia</td>
<td>4.70</td>
<td>2.50</td>
<td>1.00</td>
<td>6.00</td>
<td>1.50</td>
<td>2.00</td>
</tr>
<tr>
<td>China</td>
<td>7.50</td>
<td>2.50</td>
<td>4.00</td>
<td>8.00</td>
<td>3.70</td>
<td>3.00</td>
</tr>
<tr>
<td>Fiji</td>
<td>9.90</td>
<td>2.50</td>
<td>3.20</td>
<td>7.00</td>
<td>2.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>11.30</td>
<td>3.50</td>
<td>4.50</td>
<td>8.00</td>
<td>3.50</td>
<td>5.00</td>
</tr>
<tr>
<td>Indonesia</td>
<td>7.60</td>
<td>2.50</td>
<td>4.00</td>
<td>9.00</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Japan</td>
<td>11.60</td>
<td>5.00</td>
<td>4.00</td>
<td>9.00</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Korea R.K.</td>
<td>12.05</td>
<td>5.00</td>
<td>3.30</td>
<td>8.00</td>
<td>4.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Laos P.D.R.</td>
<td>5.00</td>
<td>2.00</td>
<td>3.00</td>
<td>6.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Malaysia</td>
<td>10.40</td>
<td>3.50</td>
<td>4.00</td>
<td>8.00</td>
<td>3.00</td>
<td>4.50</td>
</tr>
<tr>
<td>Mongolia</td>
<td>9.20</td>
<td>5.00</td>
<td>2.90</td>
<td>6.00</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>4.26</td>
<td>4.00</td>
<td>2.00</td>
<td>6.00</td>
<td>3.50</td>
<td>4.00</td>
</tr>
<tr>
<td>Philippines</td>
<td>8.40</td>
<td>5.00</td>
<td>2.50</td>
<td>4.00</td>
<td>2.50</td>
<td>3.50</td>
</tr>
<tr>
<td>Samoa</td>
<td>5.70</td>
<td>3.00</td>
<td>2.00</td>
<td>7.00</td>
<td>2.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Singapore</td>
<td>10.80</td>
<td>5.00</td>
<td>4.10</td>
<td>9.00</td>
<td>4.50</td>
<td>5.00</td>
</tr>
<tr>
<td>Taiwan</td>
<td>11.10</td>
<td>5.00</td>
<td>3.50</td>
<td>4.00</td>
<td>3.00</td>
<td>4.50</td>
</tr>
<tr>
<td>Thailand</td>
<td>8.00</td>
<td>5.00</td>
<td>4.00</td>
<td>6.00</td>
<td>4.00</td>
<td>4.50</td>
</tr>
<tr>
<td>Vietnam</td>
<td>5.40</td>
<td>3.50</td>
<td>2.50</td>
<td>6.50</td>
<td>2.50</td>
<td>1.50</td>
</tr>
</tbody>
</table>
Once all these components of ELEPs and schooling were collected, they were processed through the Statistical Package for the Social Sciences’ (SPSS) Dimension Reduction feature and given a weighted score which served as the final language variable to be used. See Table 3.2 and 3.3 for Communalities and Weight contributions which made up the final language variable. Look to Table 3.4 to see the final language variable used in the IV analysis.

Table 3.2

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeanYearsSchool</td>
<td>1.000</td>
<td>.677</td>
</tr>
<tr>
<td>MethodScore</td>
<td>1.000</td>
<td>.750</td>
</tr>
<tr>
<td>ClassSizeElem</td>
<td>1.000</td>
<td>.704</td>
</tr>
<tr>
<td>ClassSizeSecondary</td>
<td>1.000</td>
<td>.354</td>
</tr>
<tr>
<td>ContentScore</td>
<td>1.000</td>
<td>.599</td>
</tr>
<tr>
<td>TeacherTrainScore</td>
<td>1.000</td>
<td>.338</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Table 3.3

<table>
<thead>
<tr>
<th>Component</th>
<th>Component 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeanYearsSchool</td>
<td>.823</td>
</tr>
<tr>
<td>MethodScore</td>
<td>.866</td>
</tr>
<tr>
<td>ClassSizeElem</td>
<td>.839</td>
</tr>
<tr>
<td>ClassSizeSecondary</td>
<td>.595</td>
</tr>
<tr>
<td>ContentScore</td>
<td>.774</td>
</tr>
<tr>
<td>TeacherTrainScore</td>
<td>.582</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
**Economic Variable.** The economic variable chosen is the Gross Domestic Product of Purchasing Power Parity (GDP PPP) per capita for 2014. For brevity, this will be labeled as the “economic variable” or simply “GDP p.c.” in future reference. This variable was found adequate as it has the consistency of data across nations and is therefore easily comparable across all countries and all periods of times. The World Bank explanation (2014) of GDP p.c. is;

“GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.” (The World Bank, 2014).

In this sense, it shows the rate Currency A would have to be converted into Currency B to buy the same amount of goods and services in that Country B. It is commonly referred to as the Big Mac Index, taking a common product, and displaying its value (usually in USD) across nations. See Table 3.4 for the final economic variable used.

**Instrumental Variable.** As seen in other studies which use the IV (Acemoglu, Johnson, and Robinson, 2001; Arcand and Grin, 2013; Bleakely and Chin, 2004), the process tends to respond better to historical variables, so as to create distance from the dependent variable and avoid any endogeneity in results.

For this study, the year that English was introduced into national public school curriculums is used for the instrumental variable. Specifically, the year that an ELEP was first introduced onto a national public school curriculum (not just implemented in schools) and has
been *uninterrupted* in the following years. It is referred to as the instrumental variable during analysis.

The rationale (or ‘story’) is that much time is needed to create a well-functioning ELEP with sustainable and successful infrastructure. The amount of years passed since implementation would affect the level of progress that is held for a country’s 2005 ELEP. For example, a country that introduced English in 2000 would still be building its infrastructure for English language in schools, such as teacher training, and textbook development, etc. However, a country that implemented English language teaching in 1970 presumably already has much of the infrastructure built and can adapt more quickly to contemporary or new practices that better student’s proficiency.

A good example comes from China, which began teaching English in the early 20th Century. However, during the 1960s and through Chairman Mao’s influence, English language teaching was discontinued and most of the infrastructure surrounding it (textbooks and teachers) was destroyed or fled the country. It was not until 1978 that English language teaching was reintroduced onto the national curriculum and has slowly rebuilt its teaching program and infrastructure. Therefore, 1978 is considered as the year China began English teaching on a national level.

When inputting the data into SPSS statistical software, the variable was transformed to show how many years the ELEP has been in place. For example, instead of inputting the year 1999 that an ELEP began, which might be confused with a high value, 15 would be the assigned value (2014-1999). It should also be noted, that in the case of Hong Kong, which had a YOE of 151 years, was capped at 100, under the logic that after such a time, the value of more years
becomes moot. It was also done to limit the skewness it would bring statistically to the model. See Table 3.4 for the YOE data to be used (transformed into its square root).

**Variable Transformation.** When regressing the economic and instrumental variable, the skewness of the two variables were beyond normal limits (i.e., well beyond +/- 1.0), due to two or three extreme outliers. To improve the quality of the estimated model, these variables were transformed by taking their square roots. This significantly normalized the data and brought skewness closer to +1 for both variables. Table 3.4 provides the original estimates and transformed estimates.

<table>
<thead>
<tr>
<th>Table 3.4</th>
<th>Descriptive Statistics – Before and After Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic</td>
</tr>
<tr>
<td>N</td>
<td>19</td>
</tr>
<tr>
<td>Mean</td>
<td>22613.84</td>
</tr>
<tr>
<td>Median</td>
<td>9599.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>23879.79</td>
</tr>
<tr>
<td>Range</td>
<td>76143.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>2601.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>78744.00</td>
</tr>
</tbody>
</table>

Once the language variable was developed using Principal Components Analysis (the data reduction and weighting technique for variables forming a component, shown in Table 3.2 and 3.3), and the economic and instrumental variables were transformed into their square root values, the relationships between the final three variables in the proposed model were estimated in SPSS’s 2SLS regression routine. The results are summarized in Table 3.5 below.
Table 3.5

*Final Three Variable Scores for IV Analysis*

<table>
<thead>
<tr>
<th>Country</th>
<th>Language</th>
<th>SQRT Economic</th>
<th>SQRT Instrumental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>-0.60136</td>
<td>91.56</td>
<td>7.07</td>
</tr>
<tr>
<td>Brunei</td>
<td>1.40788</td>
<td>271.67</td>
<td>5.29</td>
</tr>
<tr>
<td>Cambodia</td>
<td>-2.10175</td>
<td>55.40</td>
<td>4.80</td>
</tr>
<tr>
<td>China</td>
<td>-0.02263</td>
<td>108.97</td>
<td>5.92</td>
</tr>
<tr>
<td>Fiji</td>
<td>-0.18735</td>
<td>89.11</td>
<td>9.33</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0.97342</td>
<td>230.65</td>
<td>12.29</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.23948</td>
<td>97.97</td>
<td>7.94</td>
</tr>
<tr>
<td>Japan</td>
<td>0.90635</td>
<td>190.50</td>
<td>8.12</td>
</tr>
<tr>
<td>Korea R.K.</td>
<td>1.12958</td>
<td>182.04</td>
<td>8.19</td>
</tr>
<tr>
<td>Lao P.D.R.</td>
<td>-1.50769</td>
<td>68.04</td>
<td>4.00</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.51208</td>
<td>152.05</td>
<td>7.21</td>
</tr>
<tr>
<td>Mongolia</td>
<td>0.19329</td>
<td>96.11</td>
<td>4.47</td>
</tr>
<tr>
<td>Papua New</td>
<td>-0.65622</td>
<td>51.00</td>
<td>7.62</td>
</tr>
<tr>
<td>Guinea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>-0.59230</td>
<td>81.24</td>
<td>7.75</td>
</tr>
<tr>
<td>Samoa</td>
<td>-0.76240</td>
<td>71.29</td>
<td>9.54</td>
</tr>
<tr>
<td>Singapore</td>
<td>1.46165</td>
<td>280.61</td>
<td>7.35</td>
</tr>
<tr>
<td>Taiwan</td>
<td>0.26792</td>
<td>203.81</td>
<td>7.75</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.60266</td>
<td>124.58</td>
<td>9.59</td>
</tr>
<tr>
<td>Vietnam</td>
<td>-1.26261</td>
<td>72.75</td>
<td>6.32</td>
</tr>
</tbody>
</table>
Analysis

In 2SLS, the procedure for administering the IV can be divided into two stages. However, the first IV primary assumption of Instrument Exogenism is first assessed before moving into Stage 1. This is achieved by initially examining the relationship between the economic variable and the instrumental variable using a simple Pearson correlation.

If the first primary assumption is satisfied with a low (or zero) correlation, Stage 1’s purpose is to regress the language variable on the instrumental variable and save results as a standardized score.

\[
\text{Stage 1; } X = \Pi_0 + \Pi_1 Z + V \quad (3.1)
\]

Where \(X\) represents the language predictor (which will then be saved as a predicted value, and becomes Stage 2’s adjusted language variable); \(\Pi_0\) represents the intercept; \(\Pi_1\) represents the slope; \(Z\) represents the instrumental variable (YOE); and \(V\) represents the Stage 1 error.

Stage 2’s process uses a simple linear regression equation. However, as stated previously, the independent variable to be used is the new predicted \(X\) value generated from the Stage 1 regression.

\[
\text{Stage 2; } Y = \alpha + \beta X + \epsilon \quad (3.2)
\]

Where \(Y\) represents the economic variable looking to be affected; \(\alpha\) represents the constant, or intercept; \(X\) represents the language variable used; \(\beta\) represents the slope, or coefficients taken for the accompanying independent variable; and \(\epsilon\) represents the error in predicting \(Y\), given the value of \(X\).
Results of Stage 2 will show the causal affect that the exogenous variation of $Z$ on $X$ has on $Y$, with little endogeneity between $X$ and the error term $\varepsilon$ affecting results, since any possible endogeneity between $Z$ and the error $\varepsilon$ has been eliminated in Stage 1. When Stage 2 has been completed, it can then be assessed whether the second primary assumption of instrument relevance has been satisfied.

In lieu of administering two sets of regression, SPSS’s 2SLS Regression sequence was used, since this approach combines these two linear regressions into one simultaneously estimated model. It should be noted that this feature does not allow for confidence levels to be manually adjusted, and the study therefore used the set 95% confidence level (i.e. which provides a slightly narrower range of estimated score than a 90% confidence interval).

**Interpreting the Output**

The first portion of statistical analysis undertaken will examine the SPSS output of the Pearson correlation results to satisfy the first primary assumption of exogenism. Looking next to the Model Summary can inform about whether the data fits the instrument well and therefore can be considered as an accurately representation of reality, or rather determine the explanatory power of the data. For this purpose, the redefined parameters in the model (e.g. standardized estimates, $R^2$ estimates) are discussed with respect to issues related to the small sample size.

To answer RQ1 regarding the existence of a relationship between ELEP and the national economy, the standardized coefficients will be used. In addition to using the $R^2$ to establish an effect, the significance levels of the estimates ($p$-value) will be examined, with the adjusted parameters of a smaller sample size in mind, to reject or accept the null hypothesis that there is a relationship between ELEP and GDP p.c.
If it is established that there is a statistically significant relationship, the final portion of analysis will be applying this statistical significance and using the standardized coefficient (or Beta) to estimate how much a country benefits by raising the quality of its ELEP. Since the data has been transformed into its square root version, using the unstandardized coefficient, the log stock of the language variable and the affected economic variable stock can be multiplied to estimate the amount of USD GDP p.c. that is seen as the effect. Results should take the form of this example; for every one standard deviation increase in the language variable, GDP p.c. raises by an estimated dollar amount. This will be calculated in Chapter Five.

Assumptions and Limitations

Due to the nature of the data and the aims of the research questions, there are several assumptions and limitations held by the methodology. The first mentioned prior, is the assumption that curricula issued by governments and their ministries is the reality of what is occurring in schools. Since the language variable assesses syllabi and teaching methodologies issued by governments in policy documents, it is essential that ELEPs are being fully implemented and can therefore accurately predict the level of proficiency that is being produced by schools. Unfortunately, such microscopic data that would allow the study to assess levels of implementation throughout nations is not available and would certainly be out of the reach of an outside researcher to obtain.

This leads into one of the main limitations of the study, which is the participation rate. While the study uses the assumption that schools are implementing ELEPs, it cannot assume that every child is partaking in them. The one benefit to consider is (excluding out of school children) children not partaking in public school programs most likely means a percentage are in private
schools, which presumably provide better English education, and therefore contribute to better proficiency. Refer to Appendix B for other caveats to measuring ELEPs.

**Summary of Methodology**

The purpose of this chapter was to first give rationale for how the IV approach is suitable for the research questions and aims of the study, also for its value in policy studies in regards to ensuring Exogenism and witnessing causation. Second was to elucidate and explore the sources of data and show their preparation into the final transformation that will be used for analysis. Next was to explore the technical process of running the IV approach and what will be sought in the analysis in order to satisfy the primary assumptions and understand what will be considered significant results. Last was to understand the natural limitations of this data and the subject in general.
CHAPTER 4. RESULTS

The purpose of this chapter is to display results of: the Pearson correlation to satisfy the first primary assumption of Instrument Exogenism, the descriptive statistics of the three variables, and the Instrument Relevance which is seen through the SPSS output of the 2SLS regression for the three variables. It will briefly state what these results mean in regard to their effect sizes with the new parameters for judging effect as explored in Chapter Three. It lastly provides some additional data created for the purpose of providing a context for RQ1 and RQ2.

Instrument Exogenism

To satisfy the first primary assumption of Instrument Exogenism, the output of a correlation, with a focus on the Pearson correlation between the economic and instrumental variables, and their transformed versions was conducted with results displayed in Table 4.1.

Table 4.1
Correlations for Instrument Exogenism Test

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>1</td>
<td></td>
<td>.097</td>
<td></td>
<td>.983**</td>
<td></td>
<td>.179</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.693</td>
<td></td>
<td>.000</td>
<td></td>
<td>.463</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrumental</td>
<td></td>
<td></td>
<td>.097</td>
<td></td>
<td>1</td>
<td></td>
<td>.977**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.693</td>
<td></td>
<td>.516</td>
<td></td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sqrt Economic</td>
<td>.983**</td>
<td></td>
<td>.159</td>
<td></td>
<td>1</td>
<td></td>
<td>.239</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
<td>.516</td>
<td></td>
<td>.324</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sqrt Instrumental</td>
<td>.179</td>
<td></td>
<td>.977**</td>
<td></td>
<td>.239</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.463</td>
<td></td>
<td>.000</td>
<td></td>
<td>.324</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
As seen in the untransformed data, there is a weak correlation of .097 ($p > .10$) between the economic and instrumental variables. When transformed, the correlation rises to .239. While the correlation is larger due to the data transformations, it can still be classified as weak, and is within an acceptable level of instrument exogenism in order to proceed with the IV approach.

**Descriptive Statistics**

Once this exogenism was established, the three variables’ descriptive statistics were calculated and are shown in Table 4.2.

Table 4.2

*Descriptive Statistics for Three Variables*

<table>
<thead>
<tr>
<th></th>
<th>Language</th>
<th>SQRT Economic</th>
<th>SQRT Instrumental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.00</td>
<td>132.59</td>
<td>7.39</td>
</tr>
<tr>
<td>Range</td>
<td>3.56</td>
<td>229.61</td>
<td>8.29</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.00</td>
<td>72.88</td>
<td>2.02</td>
</tr>
<tr>
<td>Median</td>
<td>.193</td>
<td>97.9</td>
<td>7.62</td>
</tr>
<tr>
<td>Minimum</td>
<td>-2.10</td>
<td>51.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.46</td>
<td>280.61</td>
<td>12.29</td>
</tr>
</tbody>
</table>

As seen in Table 4.2, the transformed economic and instrumental variable, there are cases that are greater than 2 standard deviations from the mean. This initially would give indication that some outliers have not been fully contained by the data transformation, and can be expected to cause some effect on the regression results.
Instrument Relevance

Running the 2SLS with the three final variables, results are shown in Tables 4.3 and 4.4.

Table 4.3
Model Summary

<table>
<thead>
<tr>
<th>Equation 1</th>
<th>Multiple R</th>
<th>.389</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R Square</td>
<td>.151</td>
</tr>
<tr>
<td></td>
<td>Adjusted R Square</td>
<td>.101</td>
</tr>
<tr>
<td></td>
<td>Std. Error of the Estimate</td>
<td>42.489</td>
</tr>
</tbody>
</table>

Table 4.4
Coefficients

<table>
<thead>
<tr>
<th>Equation 1</th>
<th>Unstandardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>B</td>
</tr>
<tr>
<td>Equation 1</td>
<td>132.598</td>
</tr>
<tr>
<td>Language</td>
<td>45.325</td>
</tr>
</tbody>
</table>

Exploring how well the data fits the model, the relatively small size of the sample means adjusting the parameters for what is acceptable and can be considered a moderate effect.

Recalling that according to the new parameters set by Coolidge (2013), with this smaller sample size, an adjusted $R^2$ of .101 indicates a moderate fit of the proposed model to the data. Looking to the significance of the language variable in explaining the economic outcome, and keeping the
readjustment of significance levels at 0.1 in mind, Table 4.4 suggests that the language variable had a significant (p< .10), moderate positive effect (standardized beta = 0.622) on the economic variable.

Moreover, to further the argument for statistical significance around this result, a confidence interval bracket, as suggested by Allison (1999), was also calculated. Using the $t$-value for 18 degrees of freedom (19 cases, minus 1 variable) with a 0.1 significance level, results in a $t$-value of 1.734. Multiplying this coefficient by the standard error (26.053), results in an estimate of 45.175. Adding and subtracting 45.175 from the unstandardized coefficient of 45.325 provides a bracket range of estimates from .015 to 90.5. Since the lower end of the bracket does not reach or lower below 0, it can be said that there is statistical significance within the results.

The unstandardized coefficient suggests that for every one standard deviation increase in the language variable, the square root of GDP p.c. will rise by 45.325. However, these results are harder to interpret since the square root transformation was used to normalize data and compensate for outliers. Turning to the coefficient beta estimate of 0.622, this suggests that for every one standard deviation increase in the language variable, there is a 0.622 standard deviation increase in the economic variable. This can be considered a moderate effect.

**Supplemental Data**

Looking for data needed to answer RQ1 and RQ2, calculations of the IV analysis are accompanied with additional data which provides a context of development and economic prosperity. Through trying to determine the implications of RQ1 results to theory and research in Chapter 5, literature from Development through Education attempts to show correlations between education and economic growth, with the average amount of years of schooling a strong
indicator of income. In lieu of this, it is beneficial to show the relationship between the variables and Mean Years of Schooling (found in Table 3.1).

Running a Pearson correlation, shown below in Table 4.5, of the untransformed economic variable and the Mean Years of Schooling from the raw ELEP data, results in a high correlation of .645. Taking this further, and running a correlation between the language variables, the Pearson correlation rises to .823.

Table 4.5

Correlations of Mean Years of Schooling, Economy, and Language

<table>
<thead>
<tr>
<th></th>
<th>Mean Years of Schooling</th>
<th>GDP p.c.</th>
<th>Language Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Years of Schooling</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.645**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>GDP p.c.</td>
<td>Pearson Correlation</td>
<td>.645**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.003</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Language Variable</td>
<td>Pearson Correlation</td>
<td>.823**</td>
<td>.793**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

In anticipation of RQ2’s scenario, where countries will be designated into working class and elite countries based on their language scores, Table 4.6 ranks countries from weakest to strongest and classifies them into groups based on rank. Groupings are based on number of cases: the 6 lowest are classified as weak, the middle 7 as medium, and the highest 6 as strong.
### Table 4.6

**Hierarchy of Countries based on Language Score**

<table>
<thead>
<tr>
<th>Country</th>
<th>Language</th>
<th>GDP ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>-2.10175</td>
<td>3069.00</td>
</tr>
<tr>
<td>Laos P.D.R.</td>
<td>-1.50769</td>
<td>4630.00</td>
</tr>
<tr>
<td><strong>WEAK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>-1.26261</td>
<td>5293.00</td>
</tr>
<tr>
<td>Samoa</td>
<td>-.76240</td>
<td>5082.00</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>-.65622</td>
<td>2601.00</td>
</tr>
<tr>
<td>Bhutan</td>
<td>-.60136</td>
<td>8383.00</td>
</tr>
<tr>
<td><strong>MEDIUM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>-.59230</td>
<td>6600.00</td>
</tr>
<tr>
<td>Fiji</td>
<td>-.18735</td>
<td>7941.00</td>
</tr>
<tr>
<td>China</td>
<td>-.02263</td>
<td>11874.00</td>
</tr>
<tr>
<td>Mongolia</td>
<td>.19329</td>
<td>9238.00</td>
</tr>
<tr>
<td>Indonesia</td>
<td>.23948</td>
<td>9599.00</td>
</tr>
<tr>
<td>Taiwan</td>
<td>.26792</td>
<td>41537.00</td>
</tr>
<tr>
<td>Malaysia</td>
<td>.51208</td>
<td>23118.00</td>
</tr>
<tr>
<td><strong>STRONG</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>.60266</td>
<td>15519.00</td>
</tr>
<tr>
<td>Japan</td>
<td>.90635</td>
<td>36290.00</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>.97342</td>
<td>53199.00</td>
</tr>
<tr>
<td>Korea R.K.</td>
<td>1.12958</td>
<td>33140.00</td>
</tr>
<tr>
<td>Brunei</td>
<td>1.40788</td>
<td>73806.00</td>
</tr>
<tr>
<td>Singapore</td>
<td>1.46165</td>
<td>78744.00</td>
</tr>
</tbody>
</table>
In order to provide contextual data to these rankings for RQ2, additional descriptive statistics and indicators will help better define weak and strong groups. [Countries labelled as Medium have been purposefully excluded due to the inability to clearly identify the roles they would play.] To do this, data beyond the current study needs to be drawn upon. As there are currently no compulsory English education tests used across countries sampled, data measuring educational progress and development in general will be used. Data from the United Nations Human Development Report (UNHDR), 2014 Edition (UNHD, 2014; 2005; 2000) will be employed.

This report is chosen due to its Human Development Index (HDI) and longitudinal data, which spans back to 1980. The HDI incorporates a plethora of indicators in its score such as: Income, Education, and Health and Well Being. It is the HDI score that determines the ranking of countries in the UNHDR. The selection of indicators from the report provided in Table 4.7 are HDI for 1980, 1990, 2000, 2013 and HDI Rank (Rank) for 1990, 2000, 2005, 2013. There was no reliable source of data for the 1980’s HDI rankings found and it was therefore omitted. A full explanation of these indicators can be found in the UNHDR, 2014. Note that in the absence of data being reported, a hyphen (-) was entered in the cell.
Table 4.7

*Select UNHDR Indicators for Weak and Strong Countries*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>.251</td>
<td>.403</td>
<td>.466</td>
<td>.584</td>
<td>137</td>
<td>-</td>
<td>136</td>
<td>130</td>
<td>136</td>
</tr>
<tr>
<td>Laos P.D.R.</td>
<td>.340</td>
<td>.395</td>
<td>.473</td>
<td>.569</td>
<td>67</td>
<td>110</td>
<td>140</td>
<td>133</td>
<td>139</td>
</tr>
<tr>
<td>Vietnam</td>
<td>.436</td>
<td>.473</td>
<td>.563</td>
<td>.638</td>
<td>56</td>
<td>94</td>
<td>108</td>
<td>108</td>
<td>121</td>
</tr>
<tr>
<td>Samoa</td>
<td>-</td>
<td>-</td>
<td>.654</td>
<td>.694</td>
<td>6</td>
<td>64</td>
<td>95</td>
<td>74</td>
<td>106</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>.323</td>
<td>.363</td>
<td>.423</td>
<td>.491</td>
<td>42</td>
<td>-</td>
<td>109</td>
<td>133</td>
<td>157</td>
</tr>
<tr>
<td>Bhutan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.584</td>
<td>-</td>
<td>-</td>
<td>142</td>
<td>134</td>
<td>136</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>.337</strong></td>
<td><strong>.408</strong></td>
<td><strong>.516</strong></td>
<td><strong>.593</strong></td>
<td><strong>75</strong></td>
<td><strong>94</strong></td>
<td><strong>125</strong></td>
<td><strong>119</strong></td>
<td><strong>132</strong></td>
</tr>
<tr>
<td>Thailand</td>
<td>.503</td>
<td>.572</td>
<td>.649</td>
<td>.722</td>
<td>43</td>
<td>69</td>
<td>76</td>
<td>73</td>
<td>89</td>
</tr>
<tr>
<td>Japan</td>
<td>.772</td>
<td>.817</td>
<td>.858</td>
<td>.890</td>
<td>15</td>
<td>4</td>
<td>9</td>
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<tr>
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<td>.775</td>
<td>.815</td>
<td>.891</td>
<td>27</td>
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<tr>
<td>Korea R.K.</td>
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<td>.731</td>
<td>.819</td>
<td>.891</td>
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<tr>
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<td>.822</td>
<td>.852</td>
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<td>-</td>
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<td>Singapore</td>
<td>-</td>
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<td>.800</td>
<td>.901</td>
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<td><strong>.793</strong></td>
<td><strong>.857</strong></td>
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Summary of Results

This chapter set out to look to the results of the IV analysis and supply additional data that was deemed necessary to answer RQ1 and RQ2. The first primary assumption of Instrument Exogenism was satisfied by Table 4.1’s weak correlation of .097 and .293. Instrument Relevance was satisfied (with the redefined parameters) with the coefficient’s p-value of 0.100 and secondary measures, such as the confidence interval bracket. Results of the coefficient showed that for every one standard deviation rise in the language variable, the economic variable rises by 45.325, or .622 beta.

In anticipation of RQ1 and RQ2, additional data was included in the chapter. Data including results of the Pearson correlation showing a high correlation between the mean years of schooling and economic and language variables. Also provided was the hierarchy of countries based on their language scores, and UNHDR data which provided the longitudinal data of weak and strong countries.
CHAPTER 5. DISCUSSION

The purpose of this chapter is to first review the research questions and aims, before linking results presented in Chapter Four with theory discussed in Chapter Two. It will explore how results support and further literature reviewed, and attempt to answer RQ1 and RQ2. It will end with implications of these results to policy and future research.

Summary of Questions and Goals

Recalling the two Research Questions;

1. What quantifiable impact does an English Language Education Policy have on an Asian nation’s economy?
2. Is this impact evidence that Asian nations with weaker policies are being deprived of financial returns?

As seen in RQ1, a main goal of this study was to calculate the monetary return (if any) to governments’ national economies for their investment in ELEPs and what this amount (impact) would mean to their economies. It will do this by using the results of the IV analysis and linking them to research reviewed in Development Through Education, concluding whether results are consistent with literature. RQ2 aims to first discover whether the presence of this financial return can serve as evidence, and then whether countries lacking financial capital to better their ELEPs are being systemically denied financial gains due their position within the economic hierarchy. It will attempt this by first identifying the weak and strong groups, and whether Green’s System in Motion can assist in confirming the occurrence of RQ2’s scenario, before turning to CCRT to see how it is occurring.
Research Question One

The goal of RQ1 was to determine the specific amount that ELEPs contribute to Asian economies. As discussed in Chapter Four, the final outcome of the 2SLS regression showed that for every one standard deviation of the language variable, a GDP p.c. could expect to rise by .622 standard deviation.

Observing to what scale of impact a rise of .618 in economic variable’s standard deviation would have on different countries, the unstandardized coefficient of 45.325 can be multiplied out to arrive at an estimate of $2,054 (keeping in mind that this figure is an estimate, and that in a real-world setting, such returns may not be as precise). The mean GDP p.c. of country cases is $22,613. However, over 60% of countries earn much less than this figure. The two countries at the top of the economic scale can be described as outliers, with unusually high values and well over two standard deviations away from the mean, creating a negative skew. For these economies, such as Singapore, with the highest GDP p.c. of $78,744, a gain of one standard deviation in the language variable would equal a 2% increase in their income. In contrast, the country with the lowest GDP p.c., Papua New Guinea, with $2,601 and a language variable score of -.656, an increase of one standard deviation would nearly double their GDP p.c.. In regard to countries which are in the 60% of those below the intercept, these have a mean GDP p.c. of $7,465, indicating that a one standard deviation increase to their language score would contribute an extra third to their economies.

Considering this dramatic differences in impact between economies, it could be claimed that the effect to countries on the lower end of the GDP p.c. scale would be considered strong, if not overwhelmingly beneficial. While a 2% increase to GDP p.c. is not an amount that would go
unnoticed, in contrast to the lower income groups, the impact for stronger economies would not be as great.

**Implications for Theory.** The implications of these results to the literature both confirm findings done by humanities, linguistic and economic researchers attempting to show correlation between education, linguistic diversity, and economies – and slightly extend them by attempting causation through the IV approach. Since RQ1 is primarily concerned with the quantitative results of the data, it addresses literature in Development Through Education.

Reviewing literature that bolsters the relationship between ELEPs and economic growth are the researchers in Human Capital Theory. Researchers such as Becker (1964) and Mincer (1974), who use the HCEF to show that Mean Years of Schooling is a major indicator of income. In this study, which uses the same measurement in the language variable (found in Table 3.1), countries with higher language variable scores are also high income earners and show higher averages for Mean Years of Schooling. Korea R.K., with the highest mean at 12.05 years, is in the group identified as strong in Table 4.6. Other countries in the strong group have similar figures, ranging from 8.7 (Brunei) to 12.05 (Korea R.K.) years, and have an average of 10.9 Mean Years of Schooling. This is a much higher average than those labelled weak, with an average of 5.46 Mean Years of Schooling.

Recalling Table 4.5’s Pearson correlations, and the strong correlations of .645 and .823, it is important to remember there might be confounding variables present in this brief analysis. The high correlation between the sample countries’ Mean Years of Schooling and GDP p.c. (.645) could indicate that countries with higher means are more likely to feel an impact (through the effect of the $2,054) in their economy. These strong correlations add little to the findings of the
current study and research questions. However, they do support the premise of the HCEF and Human Capital Theory; that more education equals more income. In regards to RQ1, the impact of $2,054 would be greater felt by those who have lower Means Years of Schooling, and therefore lower language variable scores.

Becker and Mincer’s conclusions with the HCEF and the correlation between Mean Years of Schooling and Income are built upon by Bleakley and Chin’s (2004) work in bilingualism, education, and income. Finding a high correlation between years of schooling, English language proficiency, and income for adult immigrants in the U.S., they concluded that the younger an immigrant enters the U.S. school system (receiving more English tuition and greater English proficiency), the higher their income would be as an adult. This is an extension upon the HCEF, with focus shifting to the impact of English proficiency on income. RQ1’s findings of statistical significance and causation are supported by these findings of an increase in schooling and English tuition leads to an increase in income.

The link between language proficiency and development are used by Arcand and Grin’s (2013) study of the relationship between language diversity, English language, and economic growth. At first demonstrating that a one standard deviation in TOEFL competence led to a .927% standard deviation increase in GDP and an increase of one standard deviation in language diversity would mean a 153% raise, results seemed to show that their independent variable of TOEFL was just as--if not more important than--some economic fixtures directly associated with GDP.

After adding robustness measures however, such as geographical variables, the second round of results showed a sharp decline in statistical significance; furthermore, this could be
achieved using OLS. This led the authors to question whether the stock of English proficiency (through TOEFL scores) could indeed be used as an exogenous factor in their model. Running more OLS regressions and allowing variables such as TOEFL to be used endogenously, the authors decide that statistically, TOEFL can be treated as either exogenous or endogenous; however, linguistic diversity is endogenous. Their conclusions were that while language diversity could predict GDP, the language variable of TOEFL, treated either endogenously or exogenously, had no statistical effect.

Although similar in design and scope, the two studies differ in the measurement used for the explanatory variable. Arcand and Grin admittedly use the TOEFL variable due to the dearth of data measuring the stock English proficiency in a foreign country. As explored in Chapter Two, this data comes with a host of measurement errors and possible confounding variables for claiming it as a reliable source of proficiency. This can be reasonably argued as the reason for the dramatic difference between the two studies and conclusions reached.

**Summary of RQ1 Results.** While using TOEFL data failed to gain statistical significance in Arcand and Grin’s work, their study’s first round of analysis demonstrated that when treating English as an exogenous factor in society, there are positive findings. A possible implication of the current study to Arcand and Grin’s work is that if language is treated as an exogenous variable, then data serving as the explanatory power must better reflect proficiency levels other than what an optional international standardized test can provide. With these different measurements, such as the ELEP variable and by extension English, there is a statistically significant effect. It does not contradict however, their claim that English is unique in this financial contribution. Would results be similar had another language of study been assessed? In this sense, it supports implications that language diversity, or fragmentation, is
consistent with economic growth. It furthers the study not only with the use of the newly
constructed language variable, but also providing evidence that English has a statistical effect.

Overall, implications of the result of a rise of .622 in the standard deviation (or $2,054) and the dramatic difference in economic impact between countries, contribute slightly to theories in Development Through Education. While results wholly support theory and findings that draw correlation between education, economic growth and development, it furthers the most recent foray into the field of language economics with placing English as an exogenous factor, demonstrating causation through use of the IV approach, and providing definitive figures for the value to national economies of English Language Education in Asia.

Research Question Two

The quantitative results and implications of RQ1 will now be applied to RQ2. As discussed in Chapter Two, this question implies a scenario of systemic disadvantage for lower income countries, who are continuously struggling to gain ground in financial sectors against higher income countries. To answer this question with the accompanying scenario, results from RQ1 need to first demonstrate if they have validity and can serve as evidence.

Justification of Evidence. The first question addressed is do data and results accurately represent the reality of language classrooms and can therefore serve as evidence? In other words, is the constructed language variable valid? Is it measuring the intended target of ELEPs and the quality of such policies across the continent? To recall, the language variable consists of six components: Mean Years of Schooling, Teacher Training, Elementary Class Size, and Secondary Class Size, Teaching Methodology, and Curriculum Content.
Admittedly only two components (possibly three, as Teacher Training might be specific to the discipline) are specifically tied to the language classroom, while the other components are concerned with schooling demographics at a national level. If the two/three ELEP-specific scores were replaced with a rubric and scored for another discipline, the variable could be adapted to measure another subject. Assuming the language facets and rubric are reliably scored, the language variable is dependent on the general state of education quality in the country, as seen in Mean Years of Schooling, Class Sizes and Teacher Training. These variables apply to all classrooms within a country and disciplines, and it can be claimed that while the variable measures ELEPs, it simultaneously incorporates and relies on the state of education quality in general.

Another concern already addressed in Chapter Three’s Assumptions and Limitations is the infeasibility of measuring the minutia of an ELEP’s implementation at local levels. Giving countries the benefit of the doubt and assuming that mandatory education policies are fully implemented is the only realistic option for outside researchers. In lieu of this and the issue of measurement validity, the study will continue under the presumption that the language variable is valid and the results of the IV can serve as evidence.

A final issue to be acknowledged regarding evidence is that with an aim to show systemic inequality between countries’ education systems and economies, the result of a .622 standard deviation increase, or $2,054, cannot serve as evidence alone. Although it demonstrates that different educational systems with various levels of quality will receive corresponding rewards, it fails to provide any context to current echelons or their practices, such as individual stages of development. For this reason, supplemental data that provided information on the relationship between countries and their progress in education and economic spheres is utilized (Found in
Tables 4.6 and 4.7). From this additional data, it is hoped that a macroscopic view of international inequality (as defined in RQ2) can be brought to light.

**Groupings.** To begin answering whether there is systemic inequality between countries with weak ELEPs and their counterparts with strong ELEPs, the two need to first be identified. Once identified, they will be given a general profile as they relate to roles defined by CCRT and Kachru’s Circles of English.

Although literature reviewed in Reproduction Theory does not specifically elucidate how to identify and classify who is elite or working class, it is reasonable to define them based on income; elites earn substantially more than the working class. Perhaps not coincidentally, as shown in Table 4.6, this is the situation with groups in this study who scored high and low language variable scores; lower ELEP countries have significantly weaker GDP p.c.s than stronger ones. Utilizing additional descriptive statistics and indicators will help to better define groups labeled into weak and strong, working class and elite. To achieve this, data from the UNHDR, shown in Table 4.7 is used.

**Weak/Working Class Group Profile.** The working classes, as described by literature reviewed, are those with a smaller number of resources who attempt to mimic the knowledge and skills of those in power. As theorists note, these are a larger population than the elite class. However, in this study, the amount of countries classified as weak has been limited based on the study’s sample size. Countries belonging to this group are classified as middle- to-low human development on the UNHDR list (UNHD, 2014), and are therefore considered the working class.

Members include: Cambodia, Laos P.D.R, Vietnam, Samoa, Papua New Guinea, and Bhutan. These countries currently rank between 106 and 157 on the UNHDR list with an average
rank of 136 (out of 187 ranked countries) and have an average GDP per capita of $4,843 USD. Within the weak group, the UNHDR 2014 HDI average score is .593 (shown as 2013).

It is also within this description of weak/working class countries that Kachru’s classification of the Circles of English can be used to identify additional common traits between countries. To recall, the three concentric circles are the Inner, Outer, and Expanding. With the exception of Samoa and Papua New Guinea, who might be considered to have a recent history of colonialism with English-speaking countries (though not officially labelled as colonies), all weak ELEP countries are considered in the Expanding Circle. In this circle, English is officially labelled as a foreign language and is only learned through formal education, where the best education is considered to be provided by NS from Inner and Outer Circle countries, usually occurring in private education institutions.

Due to the exclusion of Samoa and Papua New Guinea, it cannot be claimed that being a working class country automatically means membership in the Expanding Circle. However, with two thirds of the countries present in the model, it is likely a factor.

**Elite/Strong Group Profile.** Members of the elite group are referred to in Reproduction Theory as those with a greater number of resources, greater knowledge, and in positions of power. Countries with strong ELEPs serve as the elite as they have greater control and decision-making power with members including: Thailand, Japan, Hong Kong, Korea R.K., Brunei, and Singapore. The UNHDR 2014 classifies these countries as Very High or High Human Development, earning more than $12,700 USD GDP per capita. This group’s elite position can be further asserted by noting that many of these countries have membership in exclusive economic groups, such as the OECD, the G20, and even the G8.
Exploring their HDI rankings in Table 4.7, the group has an average rank of 29, with Thailand being an outlier and the only member of the group not labeled as Very High. The highest, Singapore (ranked 9th), has made significant gain within the last 5 years alone. The group’s HDI score ranges from Thailand’s .722 to Singapore’s .901. The number one ranked country for the 2014 report, Norway, has a HDI of .944 for comparison.

In regard to Kachru’s Circles of English, only half of the countries in the elite/strong group have had some history with colonialism or occupation and can be classified as Outer Circle countries. The exclusions are Korea R.K., Japan and Thailand. To recall, in Outer Circle countries, colonial ties to the English language usually see it used in some capacity in public domains, such as an official language, or used in government documents. This is the case in Singapore, Hong Kong, and Brunei, where many government documents can be found with English translations although it is not an official language. These countries are also known for their ability to code-switch between languages and adopt English into their own, resulting in new languages/dialects, such as Singlish (a Singaporean and English combination). While not technically classified as Outer Circle countries, Japan and Korea R.K. also exhibit evidence of this linguistic innovation, where Romanji (Japan) and Konglish (Korea R.K.) have been created to appropriate English and, in some cases, other popular foreign words.

Since only half of the countries in the elite/group fit into Kachru’s definition as Outer Circle Countries, it is not possible to say that countries with strong ELEP programs are automatically Outer Circle members. However, with instances of cultural appropriation typical of Outer Circle behavior in two thirds of the other countries, it is reasonable to claim it as a likely indicator.
Asia as an Education System. A final issue to be addressed is how education systems are used to perpetuate these social statuses. For strong and weak countries to be able to affect each other, they need to be participating in the same system. This is the reality of the global economy. However, for application into Green’s and Reproduction theories, the education system needs to be slightly reimagined. In these theories, education is never specifically mentioned to take on a global context. However, the globalization of education is discussed as a role of a capitalist society. Remembering that RQ2’s scenario essentially describes a capitalism cycle within Asia, it is therefore appropriate to think of education on the continent as one system. Individual countries could be thought of as administrators who want the best for their individual system in the larger context of education in the Asian continent. Now the elite and working class groups have been labeled and the education system that they inhabit identified, Green’s theory of the System in Motion will now be applied to confirm if the scenario of inequality is a reality.

Application to Green’s Theory. It is important to first establish that the weak/working class group is systematically denied economic growth via English use in comparison to their elite counterparts. This can be achieved by applying Education System Behavior Theory to data and results gathered.

One of the more pertinent theories of Green’s System in Motion is the Law of Last Entry. Recalling that as the n\textsuperscript{th} level is approaching universal attainment the last group to obtain it will be drawn from the lowest social economic group. At the time, this group will feel they have achieved something and will expect correlating rewards. However, they will arrive to find that a majority of their cohort have moved on to achieving the next n\textsuperscript{th} educational attainment, leaving their own recent attainment of very little value.
With the weak/working class group identified, it is clear that the lowest socio-economic group is those with weak ELEP scores. Exploring data provided in Table 4.7 for its longitudinal value, the HDI score and rank can be used to demonstrate how an increase in value (or obtaining $n^{th}$ level) is rarely rewarded by an increase in rank.

Viewing the HDI scores of the weak group, over the last 35 years, these countries have managed to increase their Human Development by an average of .225, or a 75% increase. This is in comparison with the strong group’s average increase in of .177, or 28%. Despite having greater increases in the HDI, most of the weaker countries have placed at a lower rank than their 1980 position. Those who have bettered their rank (Bhutan and Vietnam) have only done so by a few positions. Those in the strong group however, while not improving their HDI scores as greatly as the weaker group, have mostly improved their ranking, with Singapore seeing the greatest improvement, gaining 23 places since 1990.

Although this is a face-value assessment of a complicated measurement, given the subjects and data, it is reasonable to assume that despite making large gains in their HDI score, the weak group is only obtaining what the majority of the strong group have already. Therefore, as the Group of Last Entry, they are not rewarded with a higher ranking which might lead non-educational social goods. It is noted that countries might have been added to the rankings since 1980 and therefore have a displacement effect on rankings. Additionally, members of the strong group’s slight increase may be a result of being little for them to improve on in the HDI rubric.

Although the HDI score does not address educational attainment alone or any one of the $n^{th}$ levels, educational achievement is one of the three components that make up the score. It is therefore reasonable for RQ2’s proposed scenario to use these ranks and scores as loose evidence
to claim that weak countries are being systematically denied increases and therefore economic equality.

**Application of Reproduction Theory.** Through Chapter Four’s statistically significant results and Green’s theories (using UNHDR data) to relatively demonstrate that working class countries are not being rewarded in proportion to advances by strong groups, this study now turns to methods of how such disenfranchisement might be occurring using Reproduction Theory and examples from the Spread of English.

Drawing on CCRT as explored by Bordieu and Passeron, the theorists noted that the cultural capital of elite class children are more favored in education than those of working class children. In the present scenario of elite countries, students from Hong Kong, Singapore, and elsewhere, are in general well read by having more resources, are bilingual from young ages, and enjoy other such character traits encouraged by parents and rewarded by education (with such benefits as entry into elite universities, scholarships, etc.). However, with educational attainment rising across nations, even in working class countries, cultural capital transmission from parents is becoming less significant in the course of obtaining economic capital. As this occurs, it is through the school as an institution of a capitalist society and symbolic violence imposed by the elite class that denies the working class cultural capital mobility.

This symbolic violence is achieved by elites proclaiming what is important in education and/or what education matters. The working classes adopt these standards as truths, which are then etched into their schema, becoming part of their habitus which governs their practices. These practices are transmitted and reproduced in their children’s education. An issue addressed
in Chapter Two regarding the Spread of English will be used to demonstrate how this symbolic violence and habitus functions in our scenario with working class and elite countries.

In the present scenario, the group of elite countries is often responsible for dictating what skills are needed to obtain desirable jobs. An example of this can be seen through applying prerequisites or educational requirements for gaining entry to their universities (which in the era of international students is becoming more relevant). For instance, as addressed in the Academic Context of the Spread of English, much of higher education is under the influence of using English as lingua franca. English has long been considered the lingua franca in academia and particularly under the domain of scientific publishing. Many prestigious universities of elite countries have English language requirements for foreign students and similar standards. The University of Hong Kong for example, requires an IELTS score of 6.5, (University of Hong Kong, 2015) or a “good English speaker” (IELTS, 2015). Students from working class countries often seek out education from universities abroad to gain career advancement in their own. Fourteen out of the twenty top ranked universities (including University of Hong Kong) in Asia are present in the elite/strong ELEP countries, and have similar (if not higher) English standards for international students as that of the example from the University of Hong Kong (Times Higher Education, 2014).

It is reasonable to suggest that students from the working-class countries will struggle to obtain these standards for opportunities to learn in an elite’s university. However, such standards have been set as part of their habitus, and therefore are standards desired by the interests of working class parents and their government. This is consistent with literature by Guo and Beckett (2007) on the hegemony of English, where the empowering value of learning English is hoarded by elites, and furthers the gap between themselves and the working class.
Summary of RQ2 Results. This is only one example of how cultural capital practices are currently present within education systems as they relate to a capitalist society. A more comprehensive analysis of institutional practices of elite countries, as they pertain to language and economic growth, would be needed to make claim that these practices are designed to withhold financial benefits from weaker countries. However, by applying Bordieu’s theories on symbolic violence and habitus to the evidence of RQ1 and the context of RQ2’s scenario, it is possible to say that there are practices present within elite education systems that do deprive working class countries from fulfilling their full potential and being rewarded with the economic gains that come with an increase in ELEPs.

Implications to Policy

The statistically significant results of RQ1 have different implications for various countries in the study. For countries at the forefront of innovative pedagogy and practices, the increase in standard deviation might be thought of as a small rate of return for costly investments in language proficiency. For countries on the other end of the spectrum however, this rise might be used as justification to intensify policies and mimic those of more affluent countries.

These results indicate that although there could be a substantial increase to GDP p.c. by increasing ELEP quality, Green’s theory of System in Motion helps to explain that some countries might not always be the beneficiaries of such increases. This would perhaps have implications to national policy on choices for future investment. Governments choosing how to invest in language might be drawn to invest in alternative options for international trade if these present the best cost-benefit ratio. An alternative option can currently be seen in such instances as the China Ministry of Education’s Confucius Institutes which have a primary task of teaching
Chinese language and culture to foreigners, with currently over 1000 centers worldwide (Confucius Institute Online, 2014).

However, it should not be forgotten that it is also through Green’s Zero Correlation theory that shows that not acquiring an educational $n^{th}$ level (a specific English proficiency levels) means that the liabilities of being left behind by a cohort increases over time. In this case, it would result in being increasingly excluded from international trade, and external and internal organizations, therefore further limiting development.

This places weaker countries in the difficult position of wanting to keep pace with English proficiency levels of those in stronger countries due to the liabilities of being left behind, but not witnessing equal rewards for achieving similar standards. By acknowledging this deficiency, policies regarding English Language might then be more carefully considered and better tailored to the demographics and educational situation of the country, rather than policy makers uniformly adopting trending practices from countries with more resources.

However, if it is not acknowledged, there is the additional threat to preservation of cultural heritage that might be placed second to economic development. Looking to Table 4.6, many of the countries placed in the medium and weak groups, who have the most to gain from an improvement to English education, are also countries who have the most linguistic minorities, often in remote regions. If English Language policy is strengthened in these countries, minority students, who often use English as a third language, might see their native language deprioritized to the extent that it is only spoken in the home. If governments are too enthusiastic for economic development without respecting minority language and providing additional measurements for its survival, then the issue of linguicide and cultural death is a highly likely implication of policy.
Implications for Future Research

Due to the broad range of disciplines that the study draws upon and contributes to, there are many avenues of research that could be furthered or even its measurements bettered. As discussed in Chapter Three’s Limitations, as an outside researcher to many of the countries under study there is little possibility for accessing insider information, such as policy amendments, new policies, or access to historical data not available via the internet. Any future research looking to lessen measurement error could collaborate with in-country bilingual researchers who conceivably have better overall insight into historical and recent English policy. In this vein, the issue of the minutia of implementation could also potentially be addressed.

Future research in studies of language diversity, English, and economy, such as those similar to Arcand and Grin’s study might now need to consider whether treating English as an endogenous variable with different, more precise measurements, could yield similar positive results. This would indicate that there are other variables of society and economy that could better clarify where the financial return is entering the market, for instance, Foreign Direct Investments, Exporting Markets, and so on. By maintaining English as an exogenous factor, variables to be used as the Instrumental factor are only as strong as the researcher’s storytelling and ability to think outside the box for data that is assured to affect one variable, but not the other.
CHAPTER 6. CONCLUSIONS

By using Green’s Educational System Theory as a framework, the implications of countries from different socio-economic groups raising their English proficiency was illuminated via the corollaries of the System in Motion. This was helpful to show that if there is no clear corresponding reward in relation to policy and effort, then the purpose of implementing costly programs may be questioned. In other words, if it is found that lower income countries have few opportunities to increase capital, and therefore have to use limited resources with the knowledge that it will have little financial impact, then policy decisions might be reexamined.

Results of this study are far from confirming this scenario. More comprehensive investigation into institutional practices of schools, education systems, and INGOs would be required in order to claim with certainty that there is systemic disenfranchisement occurring between countries as they relate to Reproduction Theory.

One of the major contributions of this study is to the field of language economics through the ability of the IV approach and data to give estimates of a rate of return and provide real-world values from a widely-used economic indicator. While previous studies have been limited to drawing correlations due to a dearth of data, by creating the exogenous effect and confirming causation of ELEPs on the economy, this study has provided some estimates of values easily recognizable to wider audiences. This could be used by decision makers to begin debate for whether this amount warrants policy reformation or similar measures.

Although more comprehensive analysis would be needed to claim that the value of ELEPs is being not being received by weak/working class countries, RQ2s scenario’s use of Green, and Bordieu and Passeron’s theories provided clues as to where a future study could
expand. Utilizing System in Motion’s corollary of the Group of Last Entry, beside additional data from UNHDR, the study was able to demonstrate there was some inequality in effort versus reward occurring between countries. It was followed with CCRT and provided one contemporary example of an institutional practice that might be responsible for how such disparity occurs.

With the stock of national English proficiency increasing in concern for multinational organizations and corporations as they explore investment opportunities, English as lingua franca is becoming just as important intra-regionally in Asia as it is globally. English education is therefore not viewed only as a means of branching out into global markets, but drawing them into national ones. This study hopes to satisfy some queries on what is the value of such policies that are designed to enter weaker countries’ populations into markets that place them in competition with stronger economies, and raises additional questions about institutional practices that mitigate the financial benefits to this group.
APPENDIX A

Scoring Rubric and Literature References.

Choices for Scoring In-class components of a Country’s ELEP (Curriculum Content and Teaching Methodology) were taken from summarized components in Liddicoat & Scarino’s (2013) book on evaluating language programs. Although other components, such as curriculum hours and assessment were present in this summation, statistically, these facets were measured elsewhere and to include them meant greater measurement errors. In their book, the authors evaluated in-class components as part of the overall effectiveness of a language program. Other aspects were evaluated in the book, however, data for such evaluation requires qualitative and on-site analysis to be used, and was therefore left out of this rubric.

Mean (average) Years of Schooling

The Barro and Lee database (2010), which up until 2013 was the source for the United Nations Human Development (UNHD) indicators for average school participation, was used for this factor. The database collects 3 forms of census taking from each country and composites them into a single score (or years that a person over the age of 15 has in years of schooling). Data was taken from 2005 and 2010 and averaged into a single score. In the case that a country was not included in this database, the country’s Educational Statistics, as provided by their Ministry of Education was consulted. This was the case for Samoa and Taiwan.

Minimum Years of Teacher Training Required.

A quality assessment of a teacher training program takes into account many aspects of the program, such as practicum time, assessment methods, mentor programs, and similar.
Unfortunately, many of these aspects are not readily or easily available for data collection.

Moreover, there are many pathways to becoming an English teacher in countries, and therefore all have different criteria. Therefore, in this study, we give Universities and accredited teachers colleges the benefit of the doubt that they are teaching contemporary methods and skills to use in their future classrooms. In the end, the only data that is able to be accessed is the average amount of years teaching degrees/certificates takes to acquire, as dictated by the government. This data was sourced from the UNESCO’s International Bureau of Education World Data on Education, 6th Edition documents (IBE, 2006). The baseline for a teaching degree, or a degree that would score top marks, is a four year degree from a University or similar.

**Scoring**

<table>
<thead>
<tr>
<th>5/5</th>
<th>4 year + degree from a University or Teachers College</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/5</td>
<td>3 year + degree from a University or Teacher College</td>
</tr>
<tr>
<td>3/5</td>
<td>2 year + degree from a University or Teacher College</td>
</tr>
<tr>
<td>2/5</td>
<td>1 year from college or high school equivalent.</td>
</tr>
<tr>
<td>1/5</td>
<td>No degree from accredited institution required.</td>
</tr>
</tbody>
</table>

**Average Amount of Students in a Classroom**

Class size is an issue that affects many other classrooms besides the language classroom. Much literature (Biddle & Berliner, 2014; Shapson, Wright, Eason, & Fitzgerald, 1980; Pate-Bain, Achilles, Boyd-Zaharias, McKenna,1992) has shown that class size affects achievement (as well as much other showing that it has little effect on it when considering other variables (Hoxby, 2000). This issue affects the language classroom in particular in regards to teaching methodology.
and has a direct impact on students learning (Ehrenberg, Brewer, Gamoran, Willms, & Zorpette, 2001a; 2001b; Urquiola, 2006). The higher the amount of students, the more likelihood that teachers will resort to non-Communicative Language Teaching (CLT) methods, such as grammar-translation. Due to difficulties of controlling a large classroom, research has shown that the larger the class, the more likelihood teachers will revert to activities that keep students under control and in their seats. In some cultures, large class sizes present heightened anxiety for student to make mistakes, and therefore language learning suffers. While the ideal student learning situation is a 1 to 1, much of the literature describes a small class as being 13-17 students. Literature also described the ideal language classroom as being 10 or under (Horne, 1970). Scoring for this portion will say that the ideal language classroom is 13 students. Literature also showed the proportion a student’s achievement lessens when the amount of students increase by 10 (Horne, 1970). Data was taken from the UIS (2014) indicator on class sizes over the period of 2005 to the latest years available and averaged.

Scoring

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/5</td>
<td>A country must have an average of 13 or less students in the classroom.</td>
</tr>
<tr>
<td>4/5.</td>
<td>A country must have an average of between 13-20 students in the classroom.</td>
</tr>
<tr>
<td>3/5</td>
<td>A country must have an average of between 20-30 students in the classroom</td>
</tr>
<tr>
<td>2/5</td>
<td>A country must have an average of between 30-40 students in the classroom</td>
</tr>
<tr>
<td>1/5</td>
<td>A country must have an average of between 40-50 students in the classroom</td>
</tr>
<tr>
<td>0/5</td>
<td>A country must have an average of 50+students in a classroom.</td>
</tr>
</tbody>
</table>
Teaching Methodology

If a national curriculum is required to use the Communicative Language Teaching (CLT) method [also called Task-based Language Teaching (TBLT)], which has been proven in the last 20 years to be more effective for student retention than its predecessor, the Grammar-Translation method, when it comes to English language acquisition has a large effect on a national ELEPs (Norris, Bygate & Van den Branden, 2009; Van den Branden, 2006; Willis, & Willis, 2007). Many countries have long since outgrown the latter; however, research and documentation from many countries, such as China, have shown that if new methodology is not explicitly stated, teachers will revert back to the easier practices of grammar-translation. Beginning by being called task-based learning, the theory stems from Krashen’s Input hypothesis (1985). Simply put, languages are best learnt when there is ‘interaction’ with them, with the goal that students have communicative competence when they leave the classroom (not just linguistic competence) (Krashen, 1982; Larson-Freeman & Anderson, 2011; Larson- Freeman, & Anderson, 2011; Littlewood, 1981; Nunan, 1988). There should be exploration of the learner; challenge and critique of the syllabus by the learner; negotiation; interaction and interdependence among learner and teachers; providing comprehensible input; accommodation for different learners; problematizing language and learning; and managing language learning (Candlin, 2009; Canale & Swain,1980).

Scoring- Scoring favors specific mentions of CLT and/or activities that are most often associated with them (See Reference list). Alternatively, activities that are antithetical to the goals of the CLT will not earn as high marks, for instance, heavy use of methods consistent with grammar translation, etc. To receive a perfect score, a program must advocate CLT for all levels of schooling and be stated as such. Also points are given if the curriculum/outline makes use of
new learning technologies, such as making Information and Communication Technology (ICT) an integral part of the teaching process, ICT being shown in research as a contemporary practice for CLT.

**TEACHING METHODOLOGY**

Literature for English Language teaching methodology supports the Communicative Language Teaching (CLT) style. This method encompasses task-based learning, activity-based learning, and the like. This includes methodology that encourages teachers to play a facilitator in the learning process and allow students to learn through engaging activities allowing them to practice speaking and become communicatively competent, rather than only linguistically.

The antithesis of CLT, for instance, includes heavy use of methods that are consistent with grammar translation, etc. Grammar must of course be taught, however, in a dynamic way, not simply ‘chalk and talk’.

To receive a perfect score, a program must heavily advocate CLT for all levels of schooling and be stated as such. Points are also rewarded if the curriculum/outline makes use of new learning technologies, such as making ICT an integral part of the teaching process.

There should be exploration for the learner; challenge and critique of the syllabus by the learner; negotiation; interaction and interdependence among learner and teachers; providing comprehensible input; accommodation for different learners; problematizing language and learning; and managing language learning. Any methods of activities that would promote these should be considered CLT.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/5</td>
<td>A program will score if documentation suggests/shows they have a program that strongly stresses the CLT approach through; student-based-lessons, teacher-as-a facilitator, task-based-approaches, etc. The policy clearly states these will be used in the classroom and are mentioned consistently and often. Specifically addresses teacher’s role, using their pronoun. Furthermore, the curriculum/syllabus gives examples to employ the CLT style, either brief, or long explanations. Curricula in this category will most likely have ICT use as a teaching activity or content.</td>
</tr>
<tr>
<td>4/5</td>
<td>Documentation shows a program which makes mention often of CLT methodology or has practices that indicate its use. Some activities will be mentioned as examples of the CLT styles that teachers should use. ICT may be mentioned as a method of teaching.</td>
</tr>
<tr>
<td>3/5</td>
<td>Documentation makes mention they have a program which mentions the CLT method or practices which show as such</td>
</tr>
<tr>
<td>2/5</td>
<td>Documentation rarely, if at all make use of CLT methodology or practices that indicate its use. Very rarely, if any, are examples of practices mentioned.</td>
</tr>
<tr>
<td>1/5</td>
<td>A program will mention the grammar-translation method. Mentions consistent use of practices that are associated Alternatively, no mention of more contemporary methodology, such as CLT. Or, no mention of any methodology its teachers should employ.</td>
</tr>
<tr>
<td>0/5</td>
<td>No mention of teacher’s practices or activities.</td>
</tr>
</tbody>
</table>
Curriculum Content

Curriculum Content refers not only to content knowledge learned in the classroom, but also the skills taught. Does it teach the four skills individually or is it content-based? Does it go beyond the four skills to give allow students to have social interaction with it? Content and skills should include the technical aspects of the language, such as grammar, lexis and other thematic content (Dubin & Olshtain, 1986; Nunan,1988). However, it should have a ‘holistic’ approach, which has been described as focusing on the development of the whole individual as a learner (Nunan, 1991; Olshtain, 1986). For example, in the second language discipline, instead of looking and learning one particular sentence, it would look at the longer expanse of the discourse (Dubin & Olshtain, 1986, p. 113), Much of the theory that relies on the content is ingrained also in the methodology section. Indeed, the curriculum of a skill goes hand in hand with the methodology for such. Hence, much of the justifications of Communicative Language Teaching (CLT) approaches uses corresponding activities. The root of CLT is founded in Content-based and Task-based curriculum (Celce-Murcia, 1991; Ellis, 2003; Grabe, & Stoller, 1998; Met,1998; Richards, & Renandya, 2002). Content based can refer to studying a subject in the language, such as referred to the MOIs. Task based is referring to the interaction issue referred to in Krashen’s input hypothesis.

CURRICULUM CONTENT
This section is heavily imbedded in the teaching methods, where the approach of a teacher will most likely dictate what skills are being accessed/ taught. Based off the literature, scoring will value CLT methods and interaction activities as well as communicative features of a program.

Content refers to the ‘skills’ that are taught in the language classroom. A basic feature of the language classroom should be the ‘four skills’ (reading, writing, speaking and listening) and grammar.

Strong programs will go beyond the five skills and teach skills that make students ‘communicatively’ competent in a foreign language setting. Such as intercultural skills, international skills, or academic skills.
A weak program will either not have the entire 5 skills featured, or will heavily favor one over the others (as in the grammar-translation approach). It will also not make mention of the communicative aspects of language learning.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/5</td>
<td>A program must mention ‘communicative competence’ (or synonyms) as well as feature curriculum that teaches; 4 skills, grammar, cultural issues, and/or another facet mentioned above. Will make specific note of these skills in learning outcomes. It should have a rationale for the learning outcomes and the language skills.</td>
</tr>
<tr>
<td>4/5</td>
<td>A program will feature ‘communicative competence’ (or synonyms) and the four skills, grammar and one other cultural issue. Mentions communicability and these skills in learner outcomes.</td>
</tr>
<tr>
<td>3/5</td>
<td>A program features the four skills and grammar. Communicative may not specifically be listed, but a clear intent of ‘communication’ purposes should be.</td>
</tr>
<tr>
<td>2/5</td>
<td>A program features the four skills only and makes no mention of communicative aspects. May or may not mention the Grammar-translation (or synonyms) as a method.</td>
</tr>
<tr>
<td>1/5</td>
<td>Program will rarely mention the use of four skills and will have a heavy emphasis on grammar skills and other writing/reading tasks to be employed. No mention of communicative abilities.</td>
</tr>
<tr>
<td>0/5</td>
<td>No mention of skills to be taught.</td>
</tr>
</tbody>
</table>

REFERENCES

**Mean Years of Schooling/ Teacher Training**


Average Amount of Students in a Classroom


Teaching Methodology


**Curriculum Content**


APPENDIX B

The Instrumental Variable

Justification and Use. Year of Entry (YOE). The year stated for introduction is when English has been formally introduced into a national public education system and curriculum. This is always much different from private education or cram schools. If documentation cannot be found from Government sources, it was taken from authors, with 2 or three other references for corroboration. An important caveat to note is that the year of introduction must have been uninterrupted from the present. For instance, English was taught in China in 1923, but was discontinued in schools until 1967. We then claim 1967 as the year of introduction, since all infrastructure was lost in the gap years.

Caveats of the Variables

Ignoring the Multi-state Differences. In many of the larger countries- for example, China, there are many differences between curriculums. For instance, while in the country as a whole, China made English Compulsory from Grade 3. However, in select cities, such as Beijing and Shanghai, it is offered in Grade 1 (Cheng, 2011). This study however, uses a national GDP per capita, and as such, needs to consider the national educational context.

It also disregards the issue of rural and urban differences in education quality and resources. However, again there is the limitation of access to data that arises when dealing with national and regional differences.

Ignoring Subjects taught in English as MOI. Many of the more progressive countries, such as Brunei, Singapore and Thailand teach many of their core subjects, such as Mathematics
and Science in English, some starting as early as Grade 1. An important question is should we count this as instruction as English language education? In one sense, yes, it most certainly counts as not only practice, but instruction in English for Special Purposes. However, since it is impossible to know the amount of detail or curriculum practices in these disciplinary instructions, we can only consider how they contribute to practice in English skills, not instruction.

Accounting for Extra Curricular Tutoring and Shadow Education. As with any parent who wants the best for their child and who has the resources, outside tutoring also known as cram school and shadow education, is prevalent when it comes to English education in Asia. Seen more widespread in countries such as Japan and China, where corporations such as Disney have made their way into the English Education market, enough students and parents use these services to have created an entire market. However, in many of these areas, these forms of extra education are costly. It can be assumed to a certain degree that a large portion of families that use these services come from the middle to upper socio-economic classes, and most likely send their children to private education, removing themselves from the ELEP under scrutiny. However, this population still does contribute to the national economy, and do learn English (presumably receiving better education and are therefore more proficient). So, although it is unrealistic to try and assess private education programs, we can still contribute their input into percentages of private school education.

Notes on the Data Sources and Validity. The following data has been collected from various sources due to the wide range being sought. Official Government documents were the preferred and first sought (from Ministry of Education’s directly), however, many under developed countries have not yet seen it as a necessity to publish this information online and
therefore, out of reach for this author. Secondary official sources, such as UNESCO, etc. were the next preferred source. Lastly, authors (in either book chapters or peer-reviewed articles) who had referenced government documents that is not online. While it would of course been better regarding validity for the author to gather data from one consistent source, it is conceded that not all documents are available to an outsider of the language or online.

It should be noted that if there was a gap in data from a government source, UNESCO’s International Bureau of Education, 6th and 7th Edition of the World Data on Education document series was consulted.

Last to comment on is the validity issue of the language variable in measuring the reality of what is occurring in schools. Out of the 6 facets that create the language variable, or represent the ELEP, there is only one that has a real possibility to have disconnect with the realities of implementation; Teaching Methodology. While curricula and syllabi might instruct teachers on methods for the classroom, and teacher training might show them the practicalities of such methods in application, it can never be ensured that teachers are following through with such practices. This means relying and trusting that teachers are following their government’s advice and using indicated methodology. Fortunately, there is little chance of deviation for the other 5 facets of the language variable and it can be said that there is a more likely chance of validity than not.
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