To my family and my country, Haiti
ACKNOWLEDGMENTS

No combination of letters, numbers, and punctuation could ever accurately articulate how grateful I am for the inspiring people in my life. Although this short section is an attempt to communicate my thankfulness, I hope the way I live the rest of my life demonstrates my deep appreciation for the life-changing impact each person has had on me.

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Finally, to my country, Haiti, *mesi*. Thank you for giving me purpose. *Ayiti, cheri, n ap avanse...wi, n ap avanse.*
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Abstract of Dissertation Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

AN ANALYSIS OF THE HAITIAN AGRICULTURAL EDUCATION AND TRAINING (AET) SYSTEM

By

Bertrhude Albert

December 2016

Chair: T. Grady Roberts
Cochair: Amy Harder
Major: Agricultural Education and Communication

Agriculture is the foundation for securing economic growth and a prosperous future for many developing countries (United States Agency for International Development [USAID], 2015). Having a robust Agricultural Education and Training (AET) system, therefore, is an essential prerequisite for social and economic development in underdeveloped countries (Paudel, Gill, Rajotte, 2013). Limited research exists on Haiti’s AET system which is a problem because in order to strengthen the system there needs to be an understanding of the system. The purpose of the present study was to describe the Haitian AET system.

A General Systems Theory (GST) framework was used in order to investigate the Haitian AET system. Guided by GST, this research used a mix methods approach to investigate individual parts of Haiti’s AET system in order to understand the system as a whole. This study, therefore, was divided into three distinct but cohesive parts that investigated agricultural students, agricultural faculty and extension personnel. The research objectives of this study were to: (a) determine Haitian faculty’s perception of what competency areas should be focused on in order to ensure that their students are prepared to be successful extension workers upon graduation, (b) identify how teaching at multiple institutions impacts social capital of faculty
within the Haitian AET system, and (c) explore and describe influences on career development among extension personnel in Haiti.

In regards to the first objective, data showed that faculty consistently ranked the following competency areas low: (a) gender issues in agriculture, (b) adult learning, (c) behavior change, (d) critical thinking, and (e) youth issues in agriculture. In regards to the second objective, data showed that despite the amount of institutions faculty worked at, levels of bonding and linking social capital were the same. There was, however, a moderate association between higher levels of bridging social capital and teaching at more institutions. In regards to the third objective, results from the research found that the common positive influences on career development across all job types included: (a) educational background, (b) in-service training, (c) intrinsic motivation, and (d) extrinsic motivation. The common negative influences across all job types included: (a) lack of resources, and (b) environmental hindrances.

Further research on the capacity development of individuals within Haiti’s AET system should be conducted in order to ensure that Haiti’s agricultural sector is strengthened.
Agriculture is the foundation for securing economic growth and a prosperous future for many developing countries (United States Agency for International Development [USAID], 2015). Scholars such as Jared Diamond (2005) have attributed societal success to agricultural development throughout the centuries. It is, therefore, necessary to build the capacity of individuals within the agricultural sector through education and training. Agricultural Education and Training (AET) systems are an integral part of building capacity within these individuals (Paudel, Gill, & Rajotte, 2013). Because having a strong AET system is often a pre-requisite for social and economic development in underdeveloped countries, these systems have become a focal point for many international research projects and investments (Paudel et al., 2013; USAID, 2016). Without AET systems it is nearly impossible for a country to develop (USAID, 2015).

Minimal research has been conducted on agricultural capacity building institutions in Haiti. This poses a problem for the country because in order to strengthen the Haitian AET system, the system must first be described. The purpose of this study was to analyze the AET system within the country. Specifically, this study looked at the competency needs of agricultural students, the levels of social capital among agricultural faculty, and the career development of individuals within the Haitian Agricultural Extension Services (EAS). In this introductory chapter an overview of food insecurity and poverty is provided, followed by an overview of Haiti and its history. The information provided in this chapter serves as a foundation for understanding the context of this study.
Background and Setting

Food Security and Poverty

Food security is a multi-faceted concept that has garnered a plethora of definitions over the years (FAO, 2003). The complex nature of this term has been manifested in the many definitions that have emerged. In 1992, there were roughly 200 definitions of food security in published writings (Maxwell & Smith, 1992). This concept continued to be at the forefront of political and social platforms because of its severe impact on countries around the globe.

In November 1996, The World Food Summit summoned high-level representatives from 185 countries in order to define, discuss, and debate food insecurity around the globe (World Health Organization [WHO], 2012). During this meeting, they operationally defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (WHO, 2012, para. 1). This definition was built on three main pillars: food availability, food access, and food use. Many governments and organizations have since adopted WHO’s definition and have used it to leverage their efforts on the eradication of hunger.

Despite global efforts, food insecurity and undernourishment continued to be global issues that plagued the lives of billions around the globe during the 21st century. In 2015, nearly 800 million people across the globe went to bed hungry every night. The majority of these hungry individuals were smallholder farmers who were dependent on agriculture as their mainstay (USAID, 2016). This staggering statistic represented one in nine of the world’s population. As a response to the dire state of these vulnerable populations, in 2010 the United Nations (UN) established eight Millennium Development Goals (MDGs) aimed to improve the quality of life for these vulnerable populations (UN, 2015). The first goal established was to “eradicate extreme poverty and hunger” (UN, 2015, para. 1). The position and wording of this
goal illustrated two vital assumptions: (a) poverty and hunger are arguably the two most pertinent universal issues, and (b) there is a recognized and implicit relationship between poverty and hunger. The latter assumption suggests that food insecurity can be observed in regions where poverty is rampant. According to FAO (n.d.), the prevalence of hunger in developing regions is “unacceptably high” (para. 9). The widespread of hunger in developing regions indicate that there is a clear relationship between hunger and poverty (FAO, n.d.).

In 2016 the UN introduced 17 new goals called the Sustainable Development Goals (SDGs). These goals were created to replace the ambitious, but time bound MDGs, which expired in 2015. According to the UN Secretary-General Ban Ki-moon, the 17 new development goals are the “shared vision of humanity and a social contract between the world’s leaders and the people” (UN, 2016, para 1). The first of the 17 SDGs is to end poverty around the globe and the second is to end hunger around the globe (UN, 2016). The positioning and ranking of these two goals, again, show the importance and interrelatedness of hunger and poverty. In fact, the UN defined poverty as more than a lack of financial resources, but also as a lack of basic services such as hunger (UN, 2016).

Organizations and governments have further investigated the relationship between poverty and hunger. According to the World Food Program, there are many reasons for the presence of hunger in world, one of which is known as the poverty trap (World Food Program [WFP], 2016). This trap happens when “people living in poverty cannot afford nutritious food for themselves and their families. This makes them weaker and less able to earn the money that would help them escape poverty and hunger” (WFP, 2016, para. 3). For example, in developing countries, often times a farmer is unable to afford seeds, which means that he or she is unable to invest in the basic necessities to farm. Ultimately, the lack of resources needed to obtain seeds
leads to limited crop yields, which leads to an inability to provide food for the farmer’s family. Another barrier that farmers face is that they may have to cultivate crops without the resources needed to purchase proper tools and fertilizer, which decreases their viability and productivity. The interrelatedness of poverty and food insecurity can be observed among vulnerable populations around the globe. If individuals do not have the resources, they are unable to have food security, which means it is nearly impossible to “have access to sufficient, safe, nutritious food to maintain a healthy and active life” (WHO, 2012, para. 1).

Data shows that 98% of the world’s hungry live in developing countries (FAO, 2015). The distribution is heavily concentrated around specific groups, mainly rural communities, farmers, and children and women. Individuals in rural areas are susceptible to food insecurity and poverty. According to FAO (2015), three quarters of the world’s hungry live in rural areas, mainly in Asia and Africa. Like the rest of the world, rural populations are dependent on agriculture as their food source and have no alternative source of income. Farmers are yet another susceptible group. FAO claimed that about half of the world’s hungry were small-scale farmers in 2015. In addition, about 20% of the world’s hungry were landless families who had dependence on farming as their food source.

Children and women were another susceptible and vulnerable group. In 2009, an estimated 146 million children were underweight as a result of hunger (United Nations Children’s Fund [UNICEF], 2009). Although women are the world’s major food producers, they are left hungry more than their male counterparts because of traditions and social structures (FAO, 2015). In 2015, about 50% of women who were pregnant in developing countries were iron deficient (FAO, 2015). This staggering fact causes over 315,000 women to die annually
because of hemorrhage at childbirth. All in all, poverty and hunger are seemingly clustered around rural inhabitants, farmers, children, and women.

Although progress has continued to be made in the fight against hunger, an alarming amount of undernourished people still exist. The amount of undernourished people in the world decreased from 18.6% in 1990 to 10.9% in 2016 (FAO, 2015). Changes in the large populous countries, such as China and India, have impacted the overall hunger reduction trends in developing regions. A rapid progress against global hunger occurred in the 1990s. The early 2000s brought in a reduction of the current progress, which was followed by a burst of acceleration in the latter part of the decade. Data shows that the fight against malnourishment is slowly progressing. This has been impacted by less inclusive economic growth in addition to political instability in various developing regions (FAO, 2015).

A deeper look at data on the dispersion of poverty and food insecurity shows that by 2016, the prevalence of undernourishment is clustered around developing regions. The top five regions with the highest percent of undernourished included Middle Africa (41.3%), Eastern Africa (31.5%), Sub-Saharan Africa (23.2%), Caribbean (19.8%), and Southern Asia (15.7%) (FAO, 2015). Although Asia contained the highest number of people undernourished with 511.7 million, Africa contained the highest percent of undernourished with 20% of the population affected (FAO, 2015). Many nations failed to reach the first MDG of eradicating extreme poverty and hunger by 2015, which left the international community with the daunting task of finding ways to support the economic development of vulnerable countries and protect vulnerable populations.

**Haiti Overview and History**

The Republic of Haiti, located in the Greater Antilles archipelago of the Caribbean Sea, shares the island of Hispaniola with the Dominican Republic (Dubois, 2012). Haiti occupies the
western one-third of the island, while the Dominican Republic occupies the eastern two-thirds
(Central Intelligence Agency [CIA], n.d.). Haiti is the third largest country in the Caribbean,
following Cuba and its neighboring country, the Dominican Republic. In 2015, the island
boasted a population of 10.1 million although it only had 27,750 square miles, which made it the
most densely populous country in Latin America and the third most populous in the Caribbean
(Britannica, 2016).

Haiti is a peninsula that has a distinct horseshoe-shape. Its terrain is mostly rugged
mountains surrounded by small coastal plains and river valleys (Central Intelligence Agency
[CIA], n.d.). The country is the most mountainous in the Caribbean, with more than one-third of
the land situated higher than 1,500 feet (Britannica, 2016). The highest point, Chaîne de la Selle,
reaches 2680 meters and is located in the West Department (Britannica, 2016). Appropriately,
the name Haiti, or “Ayiti” is derived from the native Taino language, meaning “land of
mountains” (Dubois, 2012, p. 18). The climate throughout the country is tropical although there
is some variation depending on altitude (Britannica, 2016). Because Haiti lies in the middle of
the hurricane belt, it is susceptible to severe storms and flooding. The country is also known to
have devastating earthquakes, like the one on January 12, 2010 (USAID, 2015). Haiti’s
susceptibility to natural disasters has negatively impacted the Haitian people on several
occasions.

The history of Haiti is one filled with exploitation, turmoil, and resilience. On
Wednesday, December 6, 1492, Christopher Columbus landed on what he said was “a very great
island” and called it “Española” or Hispaniola (Heinl, 2000, p. 11). For over 2,000 years before
his arrival this island was home to hundreds of thousands of Arawak, an indigenous people who
migrated from South America (Arthur & Dash, 1999). The Spanish quickly invaded the land and
put the native Taino inhabitants to work as slaves, cultivating crops and extracting gold from rivers, streams and rivers (Arthur & Dash, 1999). In response to their maltreatment, thousands of Tainos committed suicide. In addition to suicide, some Tainos escaped to the mountains, but a vast majority were slayed through the spread of smallpox, tuberculosis, typhus and influenza (Arthur & Dash, 1999). In a short period of time, most of the Tainos had perished. As a result of the declining number of Tainos, the Spanish began to bring slaves from Africa to replenish the labor supply in 1501 (Arthur & Dash, 1999).

The high levels of slaves on the island caused the gold supply to diminish quickly. As a result, the Spanish began to focus their attention on the plethora of gold and silver in Mexico and Peru. Large areas of the western part of Hispaniola were left abandoned, leaving room for French buccaneers to occupy that part of the island. By 1697, Spain ceded the western one-third of the island to the French through the Treaty of Ryswick (Arthur & Dash, 1999). The French called their new colony Saint-Domingue and began to import a large amount of slaves from Africa to increase the labor force. In 1681 there were 2,000 slaves and by 1730 there were over a quarter million and by 1890 there were almost a half million (Arthur & Dash, 1999). Under the French rule, slaves were treated with severe brutality and torture. This widespread cruelty caused the death rate of slaves on the island to rise higher than anywhere in the western hemisphere (James, 1963). This very cruelty also empowered this French colony to become the richest in the world. Saint-Domingue was known as the Pearl of the Antilles because of its role as the foremost producer of coffee and sugar throughout the entire world (Arthur & Dash, 1999). By the 1780s, the colony was producing roughly 40% of all the sugar and 60% of all the coffee that was consumed by Europeans (Dubois, 2014).
The prosperity of this small French colony was the impetus of the start of Haitian Revolution in 1791 (James, 1963). On the night of August 22, thousands of furious slaves armed themselves with stakes, spears, iron bars, axes, knives, and spades and poured into the countryside determined to gain their independence (Alexis, 1949). Over a decade later, the rebels stood victorious. They successfully defeated one of the greatest world powers at the time and were able to claim the title of “first free black republic in the world” and the “second free nation in the western hemisphere” (Arthur & Dash, 1999). In honor of the land’s first inhabitants, these former slaves called their newly established republic “Ayiti”, or Haiti.

**Poverty and Food Insecurity in Haiti**

Haiti is a country of contrasts. Although it is rich in history and culture, for centuries it has stood as the economically poorest country in the western hemisphere and one of the poorest in the world (Arias, Leguia, & Sy, 2013). In 2015, its per capita income was only one-tenth the Latin American average, which put its poverty on the level of that which is found in Africa (World Bank, 2015). Extreme poverty has been rampant in the nation, and poverty’s devastating effects have reached millions of Haitians. In 2015, two and a half million Haitians lived in extreme poverty (World Bank, 2015). Furthermore, Haiti’s poverty rate reached 80%, which left the vast majority of Haitians struggling to find the basic necessities of life; food, shelter and clothing (USAID, 2011).

On January 12, 2010 at 4:53 pm, a devastating earthquake struck Haiti (United States Geological Survey [USGS], 2015). Less than a month after the initial shock, Haiti had experienced at least 52 aftershocks that measured 4.5 or greater (New York Times, 2010). In total, it is estimated that the powerful earthquake impacted the lives of 3 million Haitians (Columbia Broadcasting System [CBS], 2010). The destructive effect of this earthquake was a major setback to the development of the nation, further damaging an already weakened
infrastructure. The Haitian people were faced with the daunting task of rebuilding a country that was already the struggling to develop. With damages estimated up to $14 billion after the earthquake, the levels of poverty only increased since this tragic event (Sheridan, 2010).

The dire state of Haiti has compelled researchers to study the root cause of poverty in the nation. According to The World Bank (2015) the staggering levels of poverty in Haiti over the years have been attributed to factors such as; political instability, woefully poor governance, corruption, inadequate growth, poor quality of expenditures that are made, being stuck in a poverty trap, and most pertinent to the current study is an underinvestment in human capital. Very little consensus has been met on which strategies the country should take in order to advance; however, the government and international organizations have prioritized building capacity in targeted sectors, include: education, government, and agriculture (USAID, 2015).

Agriculture has been a focus because poverty in Haiti directly correlates with food security in the country (Arias et al., 2013). The level of food insecurity in Haiti was one of the highest in the world in 2015; the majority of the country’s population was undernourished (FAO, 2014). Poor nutrition and hunger affected Haitians of all ages. In 2012, 11.4% of Haitian children under the age of five were underweight, and 21.9% were stunted in their growth (FAO, 2014). Surprisingly, although these statistics were incredibly high, they represented a significant decrease in undernourishment from 61.1% in the 1990s to about 50% in 2014 (FAO, 2014). Unfortunately, increased levels of development have not kept pace with population growth, and the number of Haitians in hunger increased from 4.4 million in the early 1990s to 5.3 million in 2014 (FAO, 2014). In short, Haiti has been plagued with high levels of food insecurity that has affected millions of Haitian men, women, and children daily.
Because food insecurity has been directly related to poverty, the Haitian government prioritized re-launching agricultural production in the country (Arias et al., 2013). According to USAID (2011), agriculture employs approximately 60% of Haitians; however, Haiti has imported more than 55% of its food. Agricultural production in the country has been exceptionally low and the government has identified this sector as an area of focus for the future development of the nation.

As a result of the collective vision of combating poverty and improving the agricultural sector in Haiti, various initiatives from governments and nonprofits have emerged (Arias et al., 2013). The U.S. Government’s Feed the Future initiative and the Haitian Government’s Aba Grangou (the presidential anti-hunger initiative) have been among the top agricultural programs in Haiti (Joseph, 2012). These initiatives have a shared goal of increasing crop yields and household incomes for farmers in Haiti (USAID, 2013).

It is important to note that not all Haitians have been living in poverty. Although the vast majority of Haitians are living below the poverty line, a rich upper class does exist. This class division is stark. The World Food Program (2016) claimed that while two out of three Haitians lived on less than $2 USD a day, 10% of the richest Haitians possessed 70% of the country’s total income. This class divide is evident in income, language, and even skin color (Arthur & Dash, 1999). The majority of Haiti’s poor are blacks of African descent, who often live in rural areas. They are monolinguals individuals who speak Haitian Creole. The rich minority, on the other hand, are often mulattoes of French descent living in urban areas. This elite minority consists of bilingual individuals who speak French and Haitian Creole (Arthur & Dash, 1999). In effect, subcultures and segregated networks have formed based on the social class divide in Haiti.
Agriculture in Haiti

Agriculture was the mainstay of the Haitian economy in the late 1950s, providing employment for 80% of labor force and representing 50% of Haiti’s gross domestic product (Haggerty, 1989). As years progressed, the role of agriculture in the economy declined. By the 1980s agriculture provided only 66% of the labor force and constituted about 35% of Haiti’s GDP (Haggerty, 1989). Various factors have contributed to the decline of agriculture in Haiti, including inadequate infrastructure, animal and plant disease, unstable land ownership, low levels of agricultural technology, and a lack of capital investment (Haggerty, 1989). Furthermore, there was a severe lack of attention for the agricultural sector in Haiti. In 1989, only 5% of the national budget was allocated to the Ministry of Agriculture, Natural Resources, and Rural Development.

Haiti’s productivity has been closely tied to the mountainous topography, powerful storms, and severe environmental degradation (USAID, 2011). Productivity has highly depended on the ability of farmers to control and manage water run-off. This has been because over 60% of Haiti’s land has a slope of at least 20%. Deforestation and other degrading farming practices have caused 85% of Haiti’s country’s watersheds to degrade. All in all, Haitian farms have faced various forms of barriers and challenges that have set them back. The 2010 earthquake was not the cause of these various barriers, but rather a disaster that further exacerbated a severe problem. Specifically, irrigation canals, storage, and processing centers were greatly damaged which set back the development of the Haitian people (World Bank, 2010).

Although natural disasters, such as the earthquake in 2010, have contributed to the high levels of extreme poverty, food insecurity and agricultural underdevelopment have been identified as factors that were present in Haiti for centuries before the earthquake (FAO, 2014). Even before the earthquake, farming was a weakened structure in the country, causing Haitians
to import large amounts of agricultural products, most of which they once produced themselves, such as rice (FAO, 2014). According to FAO (2014), in 2010, food imports represented 44% of the total food availability. However, just three decades earlier, food imports represented only 19% of total food availability. Haiti has been heavily dependent on food imports to feed its people, which has crippled its economy and development. The international world and the Haitian government have identified increased agricultural production as a means by which the Haitian people could develop and increase their resiliency.

**Education in Haiti**

**History of Education in Haiti**

During Haiti’s colonial days, formal education was a luxury that was not awarded to slaves (McNulty, 2011). *Le Code Noir* or *The Black Code* was a decree that was originally passed by France’s King Louis XIV in 1685. It served as an official document of the French government that outlined the conditions of slavery throughout the French colonial empire (Logan, 1930). Although this document provided provisions for religious catechizing of slaves, it did not grant them educational rights, which left the vast majority uneducated. Furthermore, the French colonial government made minimal investments in the educational infrastructure, which created a mass exodus of intellectuals throughout the colony. Wealthy mulattoes and whites frequently left the small colony in pursuit of educational opportunities in France (Logan, 1930).

Despite a lack of formal education among Haitian leadership, education was a value that was upheld even before gaining independence in 1804. Logan (1930) noted, “The development of an extensive system of education has occupied the thoughts of many Haitian patriots and filled clause after clause in the various constitutions, laws, decrees, and circulars” (Logan, 1930, p. 410). The first Haitian constitution of 1801 was the first to identify the role of formal education within Haitian society. It held fast to the belief that the private sector should ultimately be
responsible for educating the youth in the country (Haitian Government, 1801). Article 68 of the 1801 Haitian constitution stated, “Every person has the right to form private establishments for the education and instruction of youth” (Haitian Government, 1801, para. 68). Upon gaining independence, the Haitian government addressed this matter further in Article 34 of the 1807 constitution. It established that, “A central school shall be established in each Division and proper schools shall be established in each District” (Haitian Government, 1807, para. 37). Already, in the formative years of the nation, Haitian leaders desired to establish education as a right for all Haitian citizens.

Although education has been a value and focus among the Haitian people, it has been very poorly realized within the nation (Carlson, Désir, Goetz, Hong, Jones, & White, 2012). Poor implementation, lack of resources, and weak leadership throughout the years have left the Haitian education system unable to carry out its intentions to the fullest degree (Carlson et al., 2012). Throughout Haitian history, children and youth have not been able to benefit from the educational policies that have been made on their behalf. With this realization, in 1987, the Haitian government amended the constitution. Through these amendments, education was established as a basic human right for every Haitian citizen in the country. Article 22 stated, “The State recognizes the right of every citizen to decent housing, education, food and social security” (Haiti Government, 1987, para. 22). This revision was inspired by Article 26 of the Universal Declaration of Human Rights, which states, “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory” (United Nations, 1948, para. 34).

In the 21st century, the Haitian constitution still proclaimed education to be a basic human right; however, in practicality most Haitians considered it to be more of a privilege than a
right (McNulty, 2011). Throughout the 21st century, formal education rates in Haiti were among the lowest in the western hemisphere. Fortunate families often sacrificed half of their annual income to send their children to school, yet, most families did not have that opportunity (McNulty, 2011). In 2011, of the approximately 3 to 3.5 million young children in Haiti, 800,000 did not have access to education (Bruemmer, 2011). Furthermore, the lack of capacity within the country caused the public school system to only have the ability to serve one fourth of the school age population (The World Bank, 2006). Unfortunately, children in mostly rural areas of the country were positioned disadvantageously and did not have access to a school or any form of formal education. Due to these challenges, most Haitian child only received five years of schooling (Bruemmer, 2011).

**Haitian Education System Structure**

The 1979 Bernard Reform created the current organizational structure of the Haitian educational system. Although some schools operate from the traditional organizational structure, the government has laid out a preferred system for education throughout the county. The model for this system consists of five components: (a) early childhood education, (b) primary education, (c) secondary education, (d) university education, and (e) technical and vocational education (UNESCO, 2011). Together, these five components create a system that was created for Haitian children and youth in order provide their basic human right.

Early childhood education marks the beginning of the Haitian educational experience. Students enters this cycle at three years old and exit at the age of five years old (UNESCO, 2011). Early childhood education spreads over three years and serves as the transitional phase for the student. It moves the child from the family environment to a learning one (UNESCO, 2011). At the young age of three the child enters into the system in a pre-school environment, which provides an opportunity for sensitization and early learning. Schools for early childhood
education are often called kindergartens and create a foundation for the student to proceed into the primary level of education (Carlson et al., 2012).

Most students begin with the primary education level. Students enter this education at 6 years old and exit at 14 (UNESCO, 2011). This level takes nine years to complete. Primary education is separated into three cycles; the first cycle of four years, a second cycle of two years, and the third cycle of three years (Carlson et al., 2012). According to UNESCO, the first cycle is important because it provides the student the opportunity “for integration of learning activities by introducing interrelationship between content and methodologies of the main disciples taught” (UNESCO, 2011, p. 3). The second cycle, on the other hand, “consolidates the content of the first and also embraces pre-vocational areas, such as Initiation to Technology and Productive activities (ITAP)” (UNESCO, 2011, p. 3). Finally, the third cycle offers “thorough intermediate training, and leads to the secondary level” (UNESCO, 2011, p. 3). At any point throughout these three cycles, the student has the option of moving into non-formalized education and during the 2nd and 3rd cycle, they are able to move into technical and vocational education.

Secondary education consists of four years, which leads to a diploma. Students are unable to enter into the university setting without this diploma. A student begins secondary education at the age of 15 and exits at the age of 18 (UNESCO, 2011). The first three years are called Réto, or the 1st baccalauréat. After receiving a degree for the first three years, they enter into the final year of secondary school, which is called Philo, or 2nd baccalauréat or bac II. Only after finishing Philo are the students qualified to enter into tertiary education, or university. After this cycle, the student has the option of entering into teacher training college, technical and vocational education, or the university (UNESCO, 2011).
University education varies in duration from three to five years for the licence, two years for the masters (after the licence), and six to seven years for the doctorate (UNESCO, 2011). After university, teacher training college or technical and vocational education, students aim to enter into employment poverty, high-grade repetition rate, and language barriers (Luzincourt & Gulbrandson, 2010).

Although the Haitian government aimed to make this structure universal through the Bernard Reform, all schools have not followed this structure. Some schools continued to operate under the traditional structure of thirteen years, which consists of six years of pre-schooling, followed by four years of primary education followed by three years of secondary (UNESCO, 2011). The branch of the government in charge of the Haitian education system is known as the Ministry of Education and Vocational Training, or Ministère de l’Éducation Nationale et de la Formation Professionnelle (MENFP).

Figure 1-1 illustrates the pathway Haitian children should take throughout the Haitian Education System. It is adapted from UNESCO (2011). It highlights the fact that university, technical and vocational school, and teacher training college are the three intended avenues towards employment in Haiti.

**Education in Haiti**

Although the Haitian Constitution of 1987 establishes that all Haitians have the right to free education, Haiti had one of the lowest enrollment rates in the world. In the 21st century, only 55% of children from the age of six to twelve enrolled in school. Less one-third of the enrolled students were able to reach the fifth grade (UNESCO, 2011). Language serves as a significant barrier for most Haitian children because the majority of Haitians are monolingual in Haitian Creole; however, French is the primary language of instruction (Dejean, 2010). This poses a great dilemma for the majority of Haitian Creole speaking households who do not have
deep knowledge of the French language. Additionally, many families are unable to pay the direct and indirect cost of education, which forces them to take resources from their families and decide which one of their children will be provided education (Luzincourt & Gulbrandson, 2010). Ultimately, this leads to a disproportionate amount of girls within the Haitian education system, with girls representing the minority (Luzincourt & Gulbrandson, 2010).

There were approximately 16,000 to 17,000 primary schools within the Haitian education system in 2011. The private sector dominates this with roughly 80% of all schools being private (McNulty, 2011). Although it has been considered to be the poorest country in the Western Hemisphere, Haiti has the second highest percent of private school attendance in the world (Bruemmer, 2011). Nonprofit organizations and churches have taken an active role in providing services that the Ministry of Education and Vocational Training has not been able to provide. The public sector in Haiti only serves 20% of enrolled students, which leaves admissions into those schools highly competitive (Bruemmer, 2011). Due to the severe lack of regulation and accountability, private schools have been able to charge tuition fees that most Haitian families cannot afford. The range of yearly tuition rates went from approximately 50 USD in rural areas to 250 USD in urban areas (Wolff, 2008).

All in all, the Haitian Education system has been grossly unable to provide for the needs of the Haitian people. Reforms such as the Bernard Reform of 1978, The National Plan on Education and Training (NPET) of 1997, and The Presidential Commission for Education in Haiti of 2008 have tried to address the weaknesses within the system in order to ensure that all students are provided this basic human right, however, there has been little advancement (Luzincourt & Gulbrandson, 2010).
Agricultural Education and Training (AET) System in Haiti

According to USAID (2013), an AET system “is the principle source of skilled human resources for agriculture and rural development” (p. 1). This system has the major role of increasing the human capacity development of individuals within the agricultural sector. The AET covers an array of agricultural education and training programs. This system is surely complex and multifaceted as it addresses a multitude of activities including “graduate and undergraduate degree programs; sub-tertiary diploma qualifications; certificate (secondary plus one) courses; Agricultural Technical Vocational Education and Training (ATVET); agricultural cooperative training; in-service training for public and private sector service providers; farmer training; and life-long learning events” (USAID, 2013, p. 2).

InnovATE (n.d.), classifies AET systems by suggesting there are three main ways an individual can enter into it; formal education, nonformal education, and informal education. Formal Education includes primary school, secondary school, post-secondary and vocational schools, and tertiary school (InnovATE, n.d.). Nonformal education includes extension activities and workforce development. Both formal and nonformal educational institutions could be operated by private, public, and nonprofit organizations. Finally, informal education is the everyday and self-guided learning that occurs for individuals who are working within the sector.

Within Haiti’s AET system, higher education institutions and vocational and training schools rise as the prominent agricultural education and training service providers (Global Reform and Rural Advisory Services [GFRAS], 2016). Haiti is known as the “Republic of NGOs” because of the surplus of nonprofit organizations in the country (Kristoff & Narelli, 2010). This has dramatically impacted the amount of higher education institutions and technical schools in the country. Because of the lack of oversight provided by the Haitian Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) and Ministry of Education
and Vocational Training (MENFP), there has been an uncounted number of higher education intuitions and technical schools that provide agricultural education and training throughout the nation (Luzincourt & Gulbrandson, 2010).

Although it has been difficult to count the vast number of institutions within the Haitian AET system, there are six higher education agricultural institutions viewed as leaders in the country: Université d'Etat d'Haiti (UEH), Université Quisqueya (UNIQ), Université Caraïbe (UC), Université Episcopale d'Haiti (UNEPH), Université Notre Dame d’Haïti (UNDH), and American University of the Caribbean (AUC). Of these six institutions, four are located in the nation’s capital, Port-au-Prince, including: Université d'Etat d'Haiti (UEH), Université Quisqueya (UNIQ), Université Caraïbe (UC), and Université Episcopale d'Haiti (UNEPH). The other two are located in Les Cayes, in southwest Haiti. Université d'Etat d'Haiti (UEH) is the only public university of these institutions, the others are private.

According to the deans of the agricultural institutions, UEH is oldest institution and has 95 agricultural faculty, 35 of which are full-time faculty. UEH also has 415 agricultural students. UNEPH has 65 agricultural faculty, 10 of which are full-time. UNEPH also has 500 agricultural students. UC has 40 agricultural faculty, 5 of which are full-time. UC also has 140 agricultural students. UNDH has 40 agricultural faculty, 4 of which are full-time. UNDH also has 450 agricultural students. AUC has 40 agricultural faculty, 5 of which are full-time. AUC also has 400 agricultural students. Finally, UNIQ has 37 agricultural faculty, 7 of which are full-time. UNIQ also has 275 agricultural students.

These six agricultural intuitions are members of a prestigious group of higher education institutions called the Caribbean Council of Higher Education in Agriculture (CACHE) (Caribbean Council of Higher Education in Agriculture [CACHE], n.d.). This group is a network
of regional public and private educational institutions “organized to enhance their contribution towards fostering human resource development for sustainable transformation of agriculture in the Caribbean” (CACHE, n.d., para 1). The six Haitian institutions follow the goals of CACHE as they strive to provide “excellence in agricultural education” (CACHE, n.d., para 2).

École Moyenne d’Agriculture (EMAs) are also institutions of capacity building for individuals within the agricultural sector in Haiti. They were one of the leading vocational and technical schools located in many agro-ecological zones around the country; however they closed down before 1980 (Haiti Libre, 2014). Although they were closed, the Haitian government decided the EMAs needed to be revitalized in order to train technicians, entrepreneurs, and extension workers who would be able to provide support and services to farmers, NGOs and businesses (United States Department of Agriculture, n.d.). From 2014 to 2016, many of the schools began to reopen with technical and financial support from the US government, specifically, the United States Agency for International Development (USAID) and the United States Department of Agriculture (USDA) (Haiti Libre, 2014). By March 2016, the schools located in Dondon (EMAD), the Artibonite Valley (EMAVA), and Hinche (EMDH) were reopened (Haiti Libre, 2014). The University of California, Davis (UC Davis), created a curriculum based on the methodology of teaching through practice, or learning by doing, for the agricultural students who attend the EMAs (Haiti Libre, 2014). UC Davis was placed as the lead institution responsible for training in these institutions because of it’s qualifications. There are plans to continue opening the EMAs around the country (Haiti Libre, 2014).

**Extension in Haiti**

Like most underdeveloped countries, Haiti follows a pluralistic extension system (GFRAS, n.d). This means that various types of organizations such as private, public, and nonprofits simultaneously offer extension services to Haitian farmers and other individuals
within Haiti’s agricultural sector (World Bank, n.d.). Although there is limited research on extension services in Haiti, a brief overview of a pluralistic extension system provides a deeper understanding of extension services throughout the Caribbean country.

A pluralistic extension system is a dynamic system that inherently recognizes the diversity of the agricultural sector by providing farmers with multiple avenues for agricultural support (World Bank, 2015). The diversity found in a pluralistic extension system can foster innovation and collaboration because there are multiple client groups present (World Bank, 2015). As opposed to the top-down, technology driven approaches like the technology transfer and the AKIS approach that preceded it, a pluralistic extension system puts the farmer at the center and decentralizes power by allowing the farmer to benefit from several providers as opposed to simply the government (IFPRI, 2010). This type of system is characterized by the coexistence of multiple public, private and mixed extension systems and approaches (World Bank, 2015). There are multiple players that help to support a market driven, farmer centered and decentralized system.

Ideally in a pluralistic extension system different client groups in different contexts provide services to farmers depending on demand and need (GFRAS, 2010). This process makes it possible to capitalize on the competitive advantage of different actors. For example, in a pluralistic extension system if a small-scale farmer in Haiti is in need of help with the water irrigation system on his or her farm he or she would be able to outsource help from governmental, nongovernmental, commercial or for-profit and non-profit organizations. In a system that is not pluralistic, as seen through the Agricultural Knowledge and Information System (AKIS), the main sources of knowledge would be the government (FAO, 2013).
In the AKIS model there is a knowledge triangle that has research, extension and education as the three sources of knowledge for the farmer. The AKIS model depicts a centralized, top-down model where the government holds all of the power and knowledge. A pluralistic extension system completely shifts that paradigm and makes it so that extension is not characterized by technology but the needs of the farmers and the market of the community (Swanson & Rajalahti, 2010).

Different types of pluralistic extensions exist. The type of system is in large part dependent on the history of the country and its development. Upon gaining independence, many previously colonized countries installed a ministry run extension system that did not support a pluralistic extension system (Swanson & Rajalahti, 2010). In these situations, the government was the main, if not only, advisory service provider for farmers. In many countries, however, the government has not been able to meet the increasing needs of farmers in the country. This has led to the need to have a diversity of suppliers and supporters within the agricultural sector. This made way for a pluralistic extension system in many countries throughout the world, including Haiti. The difficulty that these extension systems face, however is the daunting task of trying to organize several players with varying world views and approaches (World Bank, 2015).

Although it is fractured and weak, Haiti’s pluralistic extension system aims to provide services to individuals within Haiti’s agricultural sector (IFPRI, n.d.). The major institutions providing extension services throughout Haiti include public extension institutions, private sector firms, and non-governmental organizations (GFRAS, n.d.). The public sector is represented by the Ministry of Agriculture, Natural Resources and Rural Development, or MARND (GFRAS, n.d.). Since the 1990s, MARND has been the primary institution responsible for agricultural development throughout Haiti (IFPRI, n.d.). MARND is comprised of decentralized structures
including the Board of Agricultural Department, Municipal Agricultural Office (BAC), research and training centers, and the State University of Haiti, and the National School of Agronomy (GFRAS, n.d.). Because of limited resources and a lack of capacity, the public sector depends on the involvement of other sectors in order to ensure a minimum of basic agricultural services throughout Haiti (IFPRI, n.d.).

The private sector plays an important role within Haiti’s pluralistic extension system (GFRAS, n.d.). Specifically, the private sector has been critical in the commercialization of inputs, especially fertilizers, seeds, and agricultural tools in Haiti (GFRAS, n.d.). According to GFRAS (n.d.), “Haiti needs the private sector now more than ever to help rebuild both the country and the livelihoods of poor rural farmers” (para. 4). Private sector firms have developed an expertise in training farmers on new technologies and supplying farmer inputs, which helps to increase crop yields and productivity of farmers (GFRAS, n.d.). Although they are small and not unified, private agricultural companies such as Darbouco S.A. are an important part of Haiti’s pluralistic extension system.

Non-governmental organizations are the another group that provides critical extension services throughout Haiti. Haiti has the second highest number of nonprofits per capita which is why the country has been referred to as the republic of NGOs (Dubois, 2008). Since the 1950s, agricultural NGOs in Haiti have partially filled in the gap left by MARNDR by offering education and training to unreached rural farmers (IFPRI, n.d.). Within NGOs are both international NGOs, who are entirely dependent on international donor funds, and local NGOs, which includes farmer based organizations and peasant-led cooperatives (IFPRI, n.d.). In Haiti’s history, NGOs have been successful in “building strong local organizations that are instrumental in the transfer of agricultural information to its members” (GFRAS, n.d., para. 8).
**Problem Statement**

According to the World Bank (2015), agricultural development is one of the most powerful tools a country can use to end extreme poverty and boost shared prosperity. Furthermore, Haiti has identified underinvestment in human capital as one of the key issues facing the country’s agricultural sector (World Bank, 2005). A robust AET system, therefore, is a critical prerequisite to ensuring a viable future for the country. Unfortunately, limited research has been conducted on this system. A better understanding of Haiti’s agricultural education and training system is needed in order to identify ways to strengthen the country’s training system, which will in return strengthen its agricultural sector and the country as a whole by ensuring frontline extension practitioners have the abilities to meet farmer needs.

Extension students, agricultural faculty, and extension personnel are three key players within Haiti’s AET system. Investigating these three key plays can provide critical information about the state of Haiti’s AET system. Extension students are future leaders within Haiti’s agricultural sector, which means their competency is of great importance (Davis & Sulaiman, 2014). Haitian faculty are tasked with educating the future leaders of the Haitian agricultural sector, which means that they are in need of resources, such as social capital, that will help them effectively do their job (Putnam, 1995; Svendsen, 2000). Finally, extension personnel are the primary individuals providing education and training to Haitian farmers, which means that extension personnel must experience development in their careers in order to meet the challenging needs of their job (FAO, 2016; Rennekamp & Nall, 1993).

**Purpose and Objectives**

The purpose of this study was to describe the AET system in Haiti. The research objectives of this study were as follows:
1. Determine Haitian faculty’s perception of what competency areas should be focused on in order to ensure that their students are prepared to be successful extension workers upon graduation.

2. Identify how teaching at multiple institutions impacts social capital of faculty within the Haitian AET system.

3. Explore and describe influences on career development among extension personnel in Haiti.

**Significance of the Study**

This study has potential significance for practitioners and researchers within extension. This study provides a critical assessment of agricultural education in the most economically impoverished country in the western hemisphere (Arias et. al., 2013). An understanding of the agricultural education and training system in this country provides a basic foundation for developing strategies for strengthening the agricultural sector as a whole. The methodology used here will provide researchers with a format that could be used in other developing countries around the world. The three focus areas of this research are student’s competencies, faculty’s social capital, and extension personnel’s career development. All three of these focus areas will provide profound insight into how to help strengthen three of the main key stakeholders within Haiti’s AET system: students, faculty and practitioners. This understanding could be helpful in building resilience within a country’s agricultural sector.

The implication of this research on people working in extension is equally as important. The methodology and the data from this research provides a basis for development agencies to see the importance of focusing on competencies, social capital and career development of individuals within extension. Regardless of whether systems are in the United States or in a developing country, the methodology in this study can provide ideas and guidelines for ways to strengthen key components of agricultural sectors.
Finally, this study can be used as a tool to inspire further research in the area of capacity building within developing countries.

**Definition of Terms**

Agricultural Education and Training System: A complex and multi-faceted system of education and training programs provided to those who work in and benefit from agriculture and rural development activities, spanning activities that range from graduate and undergraduate degree programs and agricultural cooperatives trainings to life-long-learning events. (InnovATE, n.d.).

Bonding Social Capital: A specific type of social capital that “occurs within a community of individuals, such as a neighborhood” (Larson et. al, 2004, p. 24). It strengthens the ties within a homogeneous group of individuals.

Bridging Social Capital: A specific type of social capital that occurs “when members of a one group connect with members of other groups to seek access or support or to gain information” (Larson et. al, 2004, p. 66).

Career Development: “the act of acquiring information and resources that enables one to plan a program of lifelong learning related to his or her work life” (Malone, 1984, p. 216).

Capacity Development: The process through which individuals, organizations, and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time (UNDP, 2002).

Competency: “A set of observable performance dimensions including individuals knowledge, skills, attitudes, and behaviors, as well as collective team, process, and organizational capabilities, that are linked to high performance, and provide the organization with sustainable competitive advantage” (Athey & Orth, 1999, p. 216).
Extension Advisory Services (EAS): Both public extension works and private sector firms responding to specific farmer inquiries about particular production problems (Swanson & Rajalahti, 2010).

Food Security: When all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, n.d.c).

Hunger: A state, lasting for at least one year, of inability to acquire enough food, defined as a level of food intake insufficient to meet dietary energy requirements (FAO, n.d.c).

Linking Social Capital: The extent to which individuals build relationships with institutions and individuals who have relative power over them (Woolcock, 1998).

Millennium Development Goals: Eight international development goals ratified by UN member states designed to eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria, and other diseases, ensure environmental sustainability, and develop a global partnership for development by 2015 (UN, n.d.).

Non-Governmental Organization: An international or domestic organizations without legal ties to government agencies that primarily seek to conduct human development or community development-related programs, or to promote the awareness of specific causes (Swanson & Rajalahti, 2010).

Poverty: A state of low income characterized by an average daily consumption of US $1.25 or less per day, living at the subsistence level, and leading to a lack of choices, opportunity, dignity and the capacity to participate fully in society (World Bank, n.d.b).

Skill: The ability to do something that comes from training, experience, or practice (Merriam-
Webster, n.d.).

Social Capital: “The networks, norms, and trust that enable participants to act together more effectively to pursue shared objectives” (Putnam, 1995, p. 664).

Sustainable Development Goals (SDGs): 17 international development goals ratified by UN member states after the termination of the Millennium Development goals in 2015. These goals are a global call to action to help end poverty and protect the planet. The SDGs included goals such as no poverty, zero hunger, good health and well-being, quality education and gender equality (UN, 2016).

Training: Training is the process of acquiring specific skills to perform a job better (Jucious, 1963)

Assumptions

This study had the following basic assumptions:

1. Permission was granted to conduct this research from all parties in Haiti.
2. Prior research was conducted to understand the Haitian context.
3. Participants provided truthful and accurate responses to the best of their ability.
4. Participants represented varying levels of the Haitian agricultural sector.
5. Assistant Researchers were adequately trained.
6. Translations were accurate.

Limitations

This study had the following limitations:

1. Limited research has been conducted on the AET system in Haiti, which impacted the ability to triangulate data.
2. Limited research has been conducted on Haiti’s extension system, which impacted the ability to synthesize data.
3. Data collection was limited by finances and time constraints, which impacted the study’s scope.
4. Language barriers prohibited the researcher from conducting the interviews in French, the preferred language within academia. Instead, the interviews were conducted in Haitian Creole, the language spoken by all Haitians.
Figure 1-1. The Haitian Education System
CHAPTER 2
REVIEW OF LITERATURE

Chapter Overview

This chapter begins with an introduction to the epistemology and theoretical perspective that informed and guided this study. Then this chapter provides an overview of the General Systems Theory, which is the framework by which this study analyzed the Agricultural Education and Training (AET) System in Haiti. The concepts of competency, social capital, and career development are then presented, as they provided the framework for investigating each of the three research objectives. This chapter concludes with a review of relevant literature on agricultural education and training in Haiti. The purpose of this section is to show the gap in knowledge that this study fills and highlight the process taken in order to select the most appropriate research methods for this study.

Epistemology and Theoretical Perspective

Every researcher is impacted by his or her beliefs and philosophical assumptions as it pertains to research (Gray, 2013). These beliefs and assumptions are formed throughout years of educational training, journal and book readings, and scholarly communities in which researchers engage in (Creswell, 2013). Throughout the process of conducting a study, researchers are challenged with first becoming aware of their assumptions and second, determining whether or not those assumptions will guide their study (Creswell, 2013). In order for a researcher to conduct an effective study, there needs to be a strong relationship between theory and practice (Gray, 2013). This relationship should be “open, accessible and visible for audiences” (Koro-Ljunberg, Yendol-Hoppey, Smith, & Hayes, 2009, p. 687). Explicitly articulating and illustrating the relationship between these essential components of research will allow the researcher to
defend his or her research design choices and provide evidence of the validity of the research
(Koro-Ljunberg et. al., 2009).

According to Crotty (1998), there are four basic elements of any research process:
epistemology, theoretical perspective, methodology, and methods. In every study, there should
be an interrelationship between the researcher’s epistemological viewpoint and theoretical
stance, and the study’s methodology and methods (Creswell, 2013). Although it is easy for a
researcher to simply gather data in the most convenient way possible, the most effective research
occurs when the methods are intentionally selected and guided by the epistemological viewpoint
of the researcher. To be more specific, the epistemological stance of the research should
influence the theoretical perspective, which should influence the methodology, which should
determine the methods that are selected by the researcher (Crotty, 1998). In short, epistemology,
theoretical perspective, methodology, and methods are four elements that inform one another
throughout the research process and it is the duty of the researcher to recognize and articulate
this relationship (Crotty, 1998). This intentional process was taken for this study.

Because the epistemology and theoretical perspective of a study are the first two elements
embedded in the entire research process, the present chapter primarily focuses on these two
elements. A deeper look at methodology and methods can be found in later chapters. To begin,
epistemology can be defined as “the theory of knowledge embedded in the theoretical
perspective and thereby in the methodology” (Crotty, 1998, p. 3). It pertains to “the nature of
knowledge, its possibility, scope, and general basis” (Hamlyn, 1995, p. 242). Essentially, this
element of research focuses on how we know what we know. According to Maynard (1994), the
epistemology provides a philosophical foundation for selecting the kinds of knowledge that are
possible to obtain and ensuring that this knowledge is adequate and legitimate. There are a wide
range of epistemologies including: objectivism, or the belief that reality exists independently of an individual’s consciousness; constructivism, or the belief that truth does not exist externally but rather is constructed by an individual; and subjectivism, or the belief that individuals have truth imposed on them through unconsciousness, dreams, and religious beliefs (Cotty, 1998). Although this research does not neatly fit into one of these categories, it is rooted in constructivism. In other words, this research affirmed that meaning is constructed and not discovered and individuals construct their personal meanings in different ways (Gray, 2013).

This epistemological belief informed the theoretical perspective of this study. A theoretical perspective can be defined as “the philosophical stance informing the methodology thus providing a context for the process and grounding its logic criteria” (Crotty, 1998, p. 3). The assumptions brought forth when formulating the methodology of a research, leads to the development of the theoretical perspective. Researchers must do their best to reflect and state the assumptions to their chosen methodology in order to develop their theoretical perspective (Crotty, 1998). Examples of theoretical perspectives include: positivism, or the belief that the social world exists externally to the researcher and observation can be a tool used to measure its properties, and interpretivism, or the belief that the social world is culturally derived and historically situated. This research is rooted in an interpretivism approach (Gray, 2013).

As explained in Chapter 1, this study focused on understanding and describing the AET system in Haiti. To understand this complex and understudied system, this research adopted a pragmatic approach, while holding an interpretive and constructivism framework (Creswell, 2012). Although there are many forms of pragmatism, it can be defined as an approach that focuses on the outcomes of the research rather than the antecedent conditions (Creswell, 2012). Pragmatic researchers grant themselves the freedom to borrow from different epistemologies,
theoretical perspectives, and methodologies because they recognize the limitations and complementary nature of the different approaches. Three American philosophers by the name of Charles Sanders Peirce (1839–1914), William James (1842–1910), and John Dewey (1859–1952) founded this philosophical approach because they recognized the complexity of research problems called for a flexible approach (Patton, 1990). They were most concerned with finding a solution rather than the perfectly suited philosophy or methodology. According to Murphry (1990), a basic principle of pragmatism research is that it is not committed to a single system of philosophy, it is free to use the procedures that best meet its purpose and needs, and it occurs in social, historical, political and other contexts. This research adopted these basic principles.

Theoretical Framework

As aforementioned, the present research aimed to understand a complex system, the Haitian AET system. In order accomplish this goal, the researcher had to first understand the nature of systems. This understanding helped to guide the researcher in finding an appropriate way of investigating the Haitian AET system. The following section provides a foundation for understanding systems, which is the grand level theory for this entire research. Following the grand level theory are the mid-level theories, which were the frameworks that guided each of the three distinct parts of this study including: competency, social capital, and career development.

Grand Level Theory: General System Theory

Systems are everywhere. They can be defined as “sets of elements standing in interaction” (Bertalanffy, 1968, p. 38). Systems are an integral part of humanity because they create the biological, physical, political, and social realities that humans live in today (Bertalanffy, 1968). The purpose of this research was to study a specific, complex, and fragmented system in Haiti, the AET system. In order to understand and describe this system, the present study used a theoretical framework that was rooted in Bertalanffy’s (1968) General
Systems Theory (GST). The overarching claim of GST is that patterns and principals can be discerned from, and applied to, all types of systems regardless of the context (Rountree, 1977). As such, this theory is seen as being applicable to all disciplines and an integrator of various different disciplines (Rountree, 1977). The GST provided a systems perspective of AET institutions in Haiti in order to best understand and describe the Haitian AET system as a whole.

Ludwig von Bertalanffy, a biologist, first proposed the term General Systems Theory in 1928. It was developed as a response to his view of the fragmented nature of the scientific method when applied to certain contexts. Rooted in the scientific method, there was a common assumption that when describing the totality of a system, each component of a system could be analyzed as an independent entity and that components could be added in a linear fashion (Walonick, 1993). Bertalanffy disagreed with these common assumptions and argued that a system could be characterized by the interactions of its various components and the nonlinear nature of those interactions (Walonick, 1993). Bertalanffy further argued that it is impossible to fully investigate a system by simply trying to understand the individual parts in isolation of the system as a whole (Bertalanffy, 1968). The parts of a system interact in such a way that the system depends on the inter-relationship and identifiable behavior of the system (Rountree, 1977). According to Rountree (1977), this behavior is “a quality of dynamic rather than static or rigid structural systems” (p. 249). All in all, the GTS embodied the Aristotelian belief that the whole is greater than the sum of its parts.

Bertalanffy (1968) claimed the properties of systems could be generalized to all types of systems regardless of the field. This rule applies to “all branches of science, irrespective of whether inanimate things, living organisms, or social phenomena are the object of study” (Bertalanffy, 1968, p. 37). The idea of isomorphism, or the appearance of structural similarities
in different fields, became a characteristic of GST. Isomorphism allowed for GST to become a foundation for change in different disciplines. Alongside this characteristic were specific properties and elements of GTS, including: (a) each part affects the properties of the system as a whole; and (b) each part depends for its own properties and its own effect on the whole system, on the properties of some other part(s) of the system (Ackoff, 1981, p. 15-16). The adoption of these elements means that regardless of the field, all systems are a functional unit made with interacting parts at every level. These interacting parts make it so that it is impossible to fully understand the entire system without systematically and methodically studying the various interactions. In short, knowing one part of a system enables one to know something about another part.

Another critical element of GST is the notion of open and closed systems. Closed systems can be defined as “systems which are considered to be isolated from their environment” (Bertalanffy, 1968, p. 39). An example of closed systems can be seen through conventional physics. In physical chemistry we learn about the reactions, rates, and chemical equilibria of certain elements. These elements operate regardless of their environment. On the contrary, open systems can be defined as systems that “maintain itself in a continuous inflow and outflow, a building up and breaking down of components, never being, so long as it is alive, in a state of chemical and thermodynamic equilibrium but maintained in a so-called steady state which is distinct from the latter” (Bertalanffy, 1968, p. 39). Many parts of the social sciences fall within the realms of open systems. For example, almost every living organism is an open system. Living organisms allow for interactions to occur between their internal elements and the environment. Bertalanffy (1968) claimed that although these two systems differ dramatically in
nature, both open and closed systems can benefit from understanding GTS. This study specifically observed an open system.

The interdisciplinary nature of the GST allowed the researcher to adopt a philosophical framework rooted in this theory despite its wide use in unrelated fields. This framework led the researcher to investigate the Haitian AET system as it pertains to the individual institutions that make up the whole system. Furthermore, in order to understand the institutions, this research investigated the individuals that make up the institutions, primarily students, faculty and practitioners, or extension workers. All in all, GST provided a framework that allowed the researcher to investigate individuals to better understand a larger system.

The researcher of this present study held the assumption that regardless of whether institutions or individuals were aware, every institution and individual was interrelated and provided a clearer image of the entire Haitian AET system as a whole.

**Mid-Level Theory: Competency**

Students were the first individuals to be investigated within the Haitian AET system. Haitian agricultural students are the future leaders of the sector, and therefore are a critical component of this system. In order for the Haitian AET system to function effectively, it is necessary that students graduate from their institutions with critical extension competency areas. This research, therefore focused on competency areas of agriculture students in Haiti.

The concept of competency is a phenomenon that continues to be used by institutions for the development of vocational and educational training around the world (Mulder & Collins, 2006). Consequently, this concept has garnered a plethora of definitions. The recent institutionalization of competence has drawn many researchers to study this dynamic concept. In order to understand competence, it is necessary to address the three main approaches to understanding this concept; the behaviorist, the generic, and the cognitive (Mulder & Collins,
Although there are many more approaches, these three have emerged as the most prominent in the study of competence.

The behaviorist approach, “stresses the importance of observing successful and effective job performance and determining what differentiates them from their less successful counterparts” (Mulder & Collins, 2006, p. 5). One of the first academics to advocate for the study of competency was McClelland (1973). McClelland suggested the traditional practice of hiring potential employees based on intelligence alone was inappropriate. Furthermore, McClelland advocated for the practice of testing for competence rather than for intelligence. It was concluded that intelligence and aptitude tests should not be obsolete, but employers should search for competencies, or desired and observable behaviors as an alternate approach to traditional intelligence testing (McClelland, 1973).

With the behaviorist approach, competencies are achieved through training and development (McClelland, 1998). According to Mulder and Collins (2006), the definitive characteristics of the behaviorist approach, “are demonstration, observation and assessment of behavior” (p. 5). With this viewpoint, competencies are “characteristics of a person that are related to superior performance in a job that can be common across situations” (Mulder & Collins, 2006, p. 5). The behaviorist approach can be more easily measured and observed because it is based on the outward behaviors, as opposed to an inward, or cognitive capacities of an individual.

Overall, this approach focuses on the demonstrated behavior of an individual, and measures success accordingly. The behaviorist approach has its roots in the United States, however, to say that it is simply an American approach would be inaccurate. It has been used
widely in countries outside of the United States and has been embedded in perspectives such as the humanistic approach to development, education, and learning (Mulder & Collins, 2006).

The second main approach to understanding the phenomenon of competency is the generic approach. The main goal of this approach is to identify the common abilities that explain differences in performance (Mulder & Collins, 2006). Through this approach, the most effective performance indicators and their characteristics are identified and used to create a generic list of performance indicators that demonstrate competency (Norris, 1991). This generic list can then be used and adopted by different workplace contexts. Although a generic list is generated, this does imply that an institution can follow “simplistic recipes” (Hagar, 1998, p. 5). This generic list serves to direct attention onto broader categories, and it is sensitive to the changes in the workplace, or the changes in context.

An example of the generic approach can be seen through the research conducted by Barrick and Mount (1991) on the big five personality dimensions. In this study, the authors investigated the relationship between: “(a) extraversion, (b) emotional stability, (c) agreeableness, (d) conscientiousness, (e) openness, and (f) experience, to three job performance criteria; (a) job proficiency, (b) training proficiency, and (c) personal data” (Barrick & Mount, 1991 p. 62). Through this research, Barrick and Mount (1991) aimed to explain variations in job performance based on a generic list.

Finally, the cognitive approach to competency observes “all of the mental resources of individuals that are used to master tasks, acquire knowledge and achieve a good performance” (Mulder & Collins, 2006, p. 6). This approach is often seen interchangeably with intelligence or intellectual abilities (McClelland, 1998). This view of competence is not as widely received as
the behavioral and generic approaches and has been juxtaposed by scholars such as McClelland (1973), who advocate for a more behavioral view of competency.

With these approaches in mind, it is appropriate to explore the actual definition of competency. This definition has evolved over time (Athey & Orth, 1999). McClelland (1973) first defined it as components of performance that are associated with “clusters of outcomes” (p. 15). This definition evolved to a more specific view considering knowledge, skills, abilities and other characteristics that impact an individual’s performance (Athey & Orth, 1999). For the purposes of this research, competency can be defined as, “a set of observable performance dimensions including individuals’ knowledge, skills, attitudes, and behaviors, as well as collective team, process, and organizational capabilities, that are liked to high performance, and provide the organization with sustainable competitive advantage” (Athey & Orth, 1999, p. 216). This research takes a behaviorist approach to understanding competence because it is most appropriate for the present context. Another similar definition that provides deeper understanding of this term is “the capability to perform; to use knowledge, skills and attitudes that are integrated in the professional repertoire of the individual” (Mulder & Collins, 2006, p. 23).

In understanding competency, Mulder and Collins (2006) outlined 9 dimensions that encapsulate the concept: “(a) peripheral ability (as competency) verses core ability (as core competency), (b) contextual dissoluteness versus situational attachment of competence, (c) orientation of competence towards functions versus roles, (d) representation of competence in terms of knowledge versus ability, (e) focus of competence on behavior versus capability, (f) person versus system as a carrier of competence, (g) scope of competence as specific versus general, (h) learnability versus exchangeability of competence, and (i) performance orientation versus development orientation of competence” (p. 50). It was concluded that the concept of
competence is multi-dimensional and much of the definition depends on the context of the user (Mulder & Collins, 2006).

Furthermore, Mulder and Collins (2006) concluded that the concept of competency faces specific challenges. The first challenge that they identified is there are many conceptual definitions of competence and competency. The plethora of definitions of competency can make it difficult for academics and practitioners to be unified as to what competency truly is.

Secondly, Mulder and Collins (2006) argued there is an over-reliance on standardizing competency. The issue with over-standardizing competency is there is a power in the context-embeddedness of the concept. When competency is standardized, it risks the chance of losing it contextual significance.

In addition to the two aforementioned challenges, Mulder and Collins (2006) stated that competency does not automatically solve the issue of integrating learning in school with learning in the workplace, nor does competency automatically result in the design of effective learning activities. Overall, competency based learning is an effective way of teaching and learning, but it does not automatically translate into successful learning environments.

Finally, Mulder and Collins (2006) suggested that assessing competencies, especially in work situations, can be labor-intensive and time consuming. Although competency based learning can effective approach that helps to facilitate the learning and success of students, it comes at a cost for instructors who decide to take the competency approach.

Despite these challenges addressed by Mulder and Collins (2006), competence continues to be a concept that is used around the world in order to provide education and training for individuals in various professions.
Mid-Level Theory: Social Capital

Students were the first stakeholders addressed in the previous section. Another key stakeholder within Haiti’s AET system is agricultural faculty. Faculty members are tasked with training and educating the next generation of leaders within the sector, which makes their capacity just as crucial as their students. As explored later in this section, social capital is a concept that can provide resources for Haitian faculty to be successful in their profession, while improving the quality of education for their students. For this reason, social capital among Haitian faculty is the focus of the second part of this study.

The history

Social capital is a concept that became popular within the academic arena and has quickly become one of the most popular everyday terms rooting from sociology theory (Narayan & Cassidy, 2001; Portes, 1998). Although this concept has gained popularity, it is “an inevitably tricky business” when one tries to understand and measure it (Narayan & Cassidy, 2001, p. 61). This is because it has been defined a plethora of ways. Furthermore, despite its recent popularity, social capital does not embody a new idea or notion (Portes, 1998). This section will provide an overview of this concept and establish an operational definition for the current study.

Research on social capital shows that this concept dates back to David Durkheim’s contributions in the late 1890’s (Portes, 1998). Durkheim wrote about the positive impact that group life had on an individual’s life and the society as a whole (Portes, 1998). Social capital represented the advantages that came due to an individual’s social networks. Durkheim believed there were nonmonetary forms of capital that were important sources of power and influence in societies, which is the role that social capital played (Portes, 1998).

About 100 years later, Pierre Bourdieu (1986) became one of the first scholars to analyze social capital. Bourdieu defined social capital in terms of the advantages that membership in a
specific networks offer individuals. Specifically, Bourdieu defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (Bourdieu, 1986, p. 248). Essentially, Bourdieu believed that the advantages offered to an individual through these networks are tied to economic capital and other privileges of the group. Because the work of Bourdieu was published in French, it did not receive a very widespread attention in the English-speaking world; however it is still considered to be “one of the most theoretically refined among those that introduced the term in contemporary sociology discourse” (Portes, 1998, p. 3).

Bourdieu (1986) also discussed three major types of capital that could be found within a society: economic, cultural, and social. Through this discussion, Bourdieu distinguished among these types of capital because different societies have differing levels of each of these types of capitals. It was also concluded that social capital could lead to economic resources, which could result in an increase in economic capital (Portes, 2008). Likewise, social capital could increase the cultural capital of a society (Portes, 2008). This ability to change units of capital from one to another is known as the “fungibility” of the social capital (Portes, 2008, p. 2). An example of social capital changing to another form of capital could be seen through the example of an individual who is able to receive a well-paying job because they know someone who works at a company that is hiring. The social capital of the individual ultimately led them to have access to economic capital.

Bourdieu (1986) represents one of the two main perspectives from which contemporary definitions of social capital are derived. The second scholar who significantly contributed to the understanding of social capital was James Coleman (1988). Coleman (1988) defined social
capital in terms of its function. Coleman said that social capital is “a variety of entities with two elements in common: They consist of some aspect of social structures, and they facilitate certain action of actors- whether persons or corporate actors- within the structure” (Coleman, 1988, p. 98). Compared to, Bourdieu (1986), Coleman provided a vague definition of social capital, which focused on the function of social capital. This definition opened the door for the “relabeling a number of different and even contradictory processes as social capital” (Portes, 2008, p. 5). It shifted from Bourdieu’s (1986) definition, which made a distinction between the resources obtained because of social capital and the ability to obtain resources by virtue of membership in different social groups.

**Measuring social capital**

In order to measure social capital, it is necessary to establish an operational definition of this concept. According to Putnam (1995), social capital can be defined as, “networks, norms, and trust- that enables participants to act together more effectively to pursue shared objectives” (p. 665). This will serve as the operational definition for this study. Essentially, this definition of social capital focuses on the social connections, norms, and trust that lead to benefits for an individual. One of the underlying assumptions of this definition is that the more an individual connects with people, the more he or she trust those he or she connects with and vice versa (Putnam, 1995). Another underlying assumption of this definition is that social capital only exists when it is shared (Narayan & Cassidy, 2001). All in all, the three main factors that contribute to the understanding of social capital are networks, norms, and trust.

It is important to note that social capital can be measured at various levels within a society: macro, meso, and micro level (Woolcock, 1998). Narayan and Pritchett (1997) refer to the various levels as three different streams. According to Woolcock (1998), the macro level of social capital pertains to the networks, norms, and trust on the national level. The meso level
refers to the institutional level and the micro level refers to individuals/households/neighborhood level. The distinction between these three levels must be made clear in any measuring of social capital. Much research has been conducted on the ways that the individual level of social capital affects the national level and vice versa. The current research focuses on social capital on the micro level, or individual level.

The concept of social capital can be further separated into two parts for measurement, the structural dimension (which facilitates social interaction), and the cognitive dimension (which predisposes individuals to act in a way that benefits society) (Svendsen, 2000). Trust, for example, would be classified within the cognitive dimension because it predisposes individuals within a society to act in a specific way. Networks and norms could be seen as structural dimensions because they facilitate social interactions among individuals within a society. Measurements of social capital should include both the structural and cognitive dimensions in order to capture a holistic view of the concept.

Finally, in order to measure social capital, it is necessary to understand the differences between the three types of social capital: bonding, bridging, and linking. Putnam (2000), made a distinction between bonding and bridging social capital. Bonding social capital tends to “reinforce exclusive identities and homogeneous groups” (Putnam, 2000, p. 3). This type of capital connects individuals who are similar to each other. It is the “sociological superglue” (Putnam, 2000, p. 3) of society as it works to undergird reciprocity and mobilize solidarity. On the other hand, bridging social capital “connects individuals who are diverse” (Putnam, 2000, p. 3). According to Putnam (2000), this type of capital can be compared to a “sociological WD-40 lubricant” (p. 3).
Larsen, Harlan, Bolin, Hackett, Hope, and Kirby (2004) comment on the differences between bridging and bonding social capital when they say that “all forms of social capital are not equal and important differences exist between bonding social capital and bridging social capital” (Larsen et al., 2004, p. 65). For example, bridging social capital can be a more powerful form of social capital because it provides individuals with the opportunity to connect with heterogeneous groups that may have more access to resources, information and connections that close family and friends may not have. Bonding social capital, on the other hand, may not be as fruitful in providing these advantages; however, it is a necessary perquisite to developing bridging social capital (Larsen et al., 2004). Granovetter (1973) also investigated the differences between strong, or bonding, networks and weak or bridging networks. Granovetter argued that people with higher bridging social capital have a greater chance of receiving benefits due to the nature of the weak ties they have. Weak ties often provide access to information and connections that lead to mobility and opportunities. On the other hand, individual with higher bonding, or strong ties, have a more limited opportunity because they are only exposed to the information and networks that their close networks have, which often does not vary much from what they already have access to (Granovetter, 1973). Granovetter’s work emphasizes the importance and function of weak ties.

The final type of social capital is linking social capital (World Bank, 2001). This describes an individual’s ability to engage with external agencies or groups to influence their policies or obtain useful resources (Pretty, 2003). Linking social capital is often seen as an extension of bridging social capital, except instead of being horizontal connections with heterogeneous groups, it is a vertical connection (World Bank, 2001). Linking provides an
individual the opportunity to connect with organizations or groups that can provide many resources that they would not have otherwise had.

Although bonding, bridging and linking social capital differ, they all provide a deeper insight into the overarching concept of social capital. It is important to make the distinction between which types of social capital a study is investigating.

**Benefits of social capital**

Social capital is the variable of interest for this research because despite how one measures or categorizes it, academics agree that it can result in benefits for individuals and institutions both. Ferren, Kennan, and Lerch (2001) argued that social capital is equal to other assets such as financial and human capital in higher education. In its best form, social capital is a beneficial component of higher education institutions because it contributes to economic, social, and political development by encouraging the sharing of information, discouraging opportunistic mindsets and behaviors, and facilitating collective decision making (Woolcock & Narayan, 2000). Furthermore, research on social capital shows that “highly connected employee relational networks are more creative, effective, and exhibit higher member satisfaction” (Carpenter et al., 2010, p. 213).

One might ask, how does this practically look within the higher education environment? Through social capital, faculty have access to information, resources, and networks that can help them increase their effectiveness as educators (Putnam, 1995). In a country where resources are already scarce, social capital can provide support that the institutions and the government are unable to. For example, an educator with high levels of social capital may turn to his or her social networks to find books, articles, and other resources on which to base their lectures. Likewise, this faculty may decide to collaborate with other faculty to offer resources to their students.
Advantages of social capital include improvements in effectiveness of institutions (Aldridge et al. 2002, Putnam et al., 1993), improvements in the quality and accessibility of education (Putnam et al., 1993), improvements in educational attainment (Aldridge et al., 2002); improved problem solving (Putnam et al., 1993), and reduced problems such as violence and free-riding (Putnam et al., 1993). Increased levels of social capital among Haitian agricultural faculty could be used as a powerful tool to improve the quality of education that agricultural students are receiving in Haiti. Because of these benefits, the present research sought to measure levels of social capital among Haitian agricultural faculty.

**Mid-Level Theory: Career Development**

Extension personnel are yet another group of essential key players within Haiti’s AET system. These individuals provide the support, training, and education needed by Haiti’s farmers (Davis, 2008). The capacity of extension personnel is of great importance because they are the ones directly impacting agricultural yields and production on a daily basis. For this reason, the third and final part of this study investigated the career progression of extension workers in Haiti’s AET system.

According to Dalto, Thomas, and Price (1997), an individual must to be able to change or he or she will stagnate. With a growing and changing world, organizations and individuals have an urgent need to either grow or become obsolete (Rennekamp & Nall, 1993). Career development is a concept that allows an individual to develop within his or her careers in a positive way. According to the Personnel and Organizational Sub-Committee of the Extension Committee on Organizations and Policy, “career development and enhancement for the individual employee are part of the overall (change)...the continuing professional development of faculty and staff will be necessary to meet the demands and expectations of the new workplace” (Extension Committee on Organization and Policy, 1992). There is a consensus
Among professionals that career development and professional development are essential components for individuals and organizations both.

For the purposes of this research, career development can be defined as the “act of acquiring information and resources that enables one to plan a program of lifelong learning related to his or her work life” (Malone, 1984, p. 216). It spans one's entire lifetime. Career development allows for a person to grow in his or her respective field over a period of time, which solidifies who he or she is and how he or she operate at work.

In an attempt to understand the dynamics of career development, Krumbolz, Michell, and Jones (1976) created a list of four main determinants that contribute to this concept. The determinates of career development included: (a) an employee’s genetics and special abilities such as race and physical disabilities, (b) an employee’s environmental conditions such as political and social forces, (c) an employee’s learning experiences such as observations, and (d) an employee’s task approach skills, such as work habits and performance standards (Krumbolz et al., 1976). The researchers concluded that career development is the result of constant interactions between the four determinates that were mentioned (Krumbolz et al., 1976).

Many career development models have emerged in an attempt to further understand the dynamics of career development within Extension and Advisory Services (Conklin et al., 2002; Coppernoll & Stone, 2005; Flavell 1971; Kohlberg 1969; Rennekamp & Nall, 1993). Most of these career development models can be classified into one of two categories: (a) competency based, and (b) career stages. Competency based models focus on the knowledge, skills, attitudes, and behaviors extension personnel need in order to experience career development (Coppernoll & Stone, 2005; Cooper & Graham, 2001). Conversely, career stage models address the needs, motivators, and organizational strategies EAS institutions should focus on in order to help
extension employee’s progress through the multiple phases of career growth (Kutilek, et al., 2002).

Stone and Bieber (1997) defined competency as the “application of knowledge, technical skills, and personal characteristics that lead to outstanding performance” (p. 1). The researchers suggested that competencies ought to be used to help improve the performance and development of extension personnel. Competency models have been created in order to identify specific core skills and characteristics needed by EAS employees (Rennekamp & Nall, 1994; Stone & Coppernoll, 2004). These models have been used to help leaders within EAS institutions facilitate the professional development of extension employees, which can improve the overall quality of services offered by EAS (Suvedi & Kaplowitz, 2016)

Despite country context, there exists commonality among competency areas that are perceived as important to extension professionals around the globe. Researchers are in agreeance that both functional and technical skills are needed in order for extension professionals to be successful in their job (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016). Some of the most commonly reported functional skills include: (a) critical thinking or problem solving, (b) communication, (c) technology, (d) self-reflection, and (e) program planning, implementation and evaluation (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016).

The second common category for career development models is career stages. Dalton, Thompson, and Price (1997) provided the original framework for understanding career development through their Four Stage of Professional Career Model. The researchers created this four-part model of career development because of the concerns they had with the career models
of their day, specifically the pyramid model. Dalton et al. (1997) argued that the commonly used pyramid model did not consider important realities. Dalton et al. (1997) claimed,

Organizations found that the pyramidal model failed to take important realities into account. Too often, they found themselves promoting a key technical specialist to a management position because it was the only way to reward him. More and more firms began to set up special new pay and promotion schemes such as the dual ladder for their professional employees in order to recognize the critical contributions they could make as individuals (p. 21).

As a result, the researchers developed the following four successive career stages: (a) apprentice, (b) colleague, (c) mentor, and (d) sponsor. All four stages involve different tasks, types of relationships and psychological adjustments.

The Four Stage of Professional Career Model was later adapted by Rennekamp and Nall (1994) and then Kutilek, Gunderson, and Conklin (2002). Kutilek et al. (2002) consolidated the four stages into three. The stages in Kutilek et al. (2002) final model of career development are entry, colleague, and counselor and advisor. The entry stage is characterized as the first stage of employment (Kutilek et al., 2002). Employees in this stage are new to the organization and are trying to understand the culture, structure of the organization. In the entry stage employees are in a state of dependence as they try to understand the skills essential to perform the job (Kutilek et al., 2002).

After the entry stage, employees transition into the colleague stage. During the colleague stage employees grow in independence, autonomy, and professional knowledge (Kutilek et al., 2002). This is the stage where employees focus on refining at least one area of expertise. Employees in this stage often seek out opportunities for further development so that he or she is able to continue assuming special tasks (Kutilek et al., 2002). Employees may remain in the colleague stage for many years, depending on the organization.
The final stage employees transition into is the counselor and advisor stage. During this final stage, employees assume responsibility for other employees within the organization (Kutilek et al., 2002). According to Kutilek et al. (2002), characteristics of this stage include “movement from independent contributions to a focus on interdependence and the ability to work through others (p. 6). Greater responsibility is given to employees in this stage because they are the individuals who are tasked with the decision making and problem solving of the organization (Kutilek et al., 2002).

Change and challenges are inevitable components of working within EAS (Rennekamp & Nall, 1993). As such, career development can offer a practical approach for extension personnel to adapt and develop as a professional (Burke, 2002). Both career development models, the competency based and career stages, offer a framework for employees to experience career development. Despite which model is used, it is important to investigate the influences that impact extension personnel’s career development journey. Understanding these influences may help professionals create strategies that use positive influences to facilitate career development.

Research has been conducted on the positive and negative influences that impact career development of extension personnel. Herzberg, Mausner, and Snyderman (1959) investigated the foundations of job motivation in the workplace. Herzberg et al. (1959) proposed the Motivation-Hygiene Theory, which states that employees are influenced by two independent dimensions: (a) workplace factors that cause job satisfaction, and (b) workplace factors that prevent job dissatisfaction. The researchers proposed that these two dimensions are not opposites, but instead entirely different components. Motivators such as achievement, recognition, work itself, responsibility, and personal growth produce job satisfaction. Hygienes such as policy and administration, supervision, working conditions, and pay prevent job dissatisfaction. Herzberg et
al. (1959) concluded that employees are more encouraged by motivators than they are by hygienes. The present research used the Motivation-Hygiene Theory as a framework to classify positive and negative influences on extension personnel’s career development.

**Literature Review**

The grand level and mid-level theories in the previous section provided a theoretical framework for the present research. The next step in the research process was to explore the body of research that already exists on key topics that pertain to the present research. The following section provides a literature review that addresses topics of competency, social capital, career development, education in Haiti, agricultural education in Haiti, and agricultural education around the world.

**Competency**

Establishing core competencies and competency areas needed for the success of extension personnel has become a popular focus for researchers (Boyd, 2003; Burke, 2002; Gonzalez, 1982; Reynolds, 1993). The significance of competency attainment among extension personnel is expressed through the writing of Maddy, Niemann, Lindquist, and Bateman (2002), “extension employees should possess the necessary competencies to anticipate and deliver quality educational programs of relevance and importance” (p. 1). Through this statement, Maddie et al. (2001) reaffirmed the notion that establishing core competencies for extension personnel is a necessary prerequisite to delivering quality educational programs of relevance and importance.

Keita and Luft (1987) echoed the sentiments of Maddy et al. (2002), when they suggested that extension agents must develop the right abilities, skills and attitudes in order to be successful in their career. Keita and Luft (1987) investigated 78 extension agents in North Dakota, South Dakota, and Minnesota in order to identify competencies that are most important for agricultural...
extension agents to possess before beginning their career. Among these highly ranked competencies were: (a) get along with people, (b) remain current through regular readings, workshops, and conferences, (c) develop support of local people for extension programs, and (d) assess county situations and needs. (Keita & Luft, 1987).

The search for core competencies needed by extension personnel was continued by the Blue Ribbon Commission of North Carolina Cooperative Extension (NCCE) in 2001. The NCCE (2001) established seven core competencies that they believed were needed for extension personnel. The seven competencies were: (a) knowledge about extension, (b) subject matter expertise, (c) programming skills, (d) professional ethics, (e) communication skills, (f) human relation skills, and (g) leadership skills. Texas AgriLife Extension also developed core competencies they believed all extension personnel needed (Stone & Coppernoll, 2004). These competencies included: (a) subject matter expertise, (b) organizational effectiveness, (c) develop and involve others, (d) communications, (e) action oriented, and (f) personal effectiveness (Stone & Coppernoll, 2004). The overlap of these two studies showed that subject matter expertise and communication were two competencies that were highly regarded among researchers.

The search to identify core competencies needed by extension personnel was further continued by Scheer, Ferrari, Earnest, and Connors (2006). Scheer et al. (2006) developed the Ohio State Model in order to illustrate the knowledge, skills and behaviors extension students must obtain in order to be successful extension personnel. The 10 core competencies proposed by the researchers was based off of the work of Cooper and Graham (2001) and Levine (Scheer et al., 2006). Some of the included competencies included: (a) extension knowledge, (b) communications, (c) program planning, implementation, and evaluation, (d) applied research, and (e) theories of human development and learning. Scheer et al. (2006) used these
competencies to evaluate the undergraduate and graduate curriculum at The Ohio State University in order to identify areas of improvement and reform.

In 2010 Harder, Place, and Scheer conducted a study in order determine the competencies that specifically entry-level extension U.S. professionals would need in 2015. Harder et al. used a Delphi panel of nationally recognized Cooperative Extension experts in the U.S. to help them select the top competencies that would be needed by entry-level extension professionals.

Harder et al. (2010), concluded there were nineteen core competencies that were necessary for entry-level extension professionals in 2015. There were two main groups identified: competencies relating to program development process and interpersonal skills (Harder et al., 2010). Additionally, the researchers found that it was critical for the professionals to have applied research skills, attain extramural funding, be grounded in technical/subject matter, and have volunteer development. The competencies that the researchers found were consistent with those that were proposed by Scheer et al. (2006).

Harder et al. (2010) suggested that the 19 core competencies are essential for the success of entry-level extension professionals in the U.S. They also suggested that it would be beneficial for an organization to use these competencies as a guide for hiring and training future extension workers. Finally, the researchers concluded that their results are not only relevant for the state Extension systems, but also for academic extension programs found in universities. The researchers (Harder et al., 2010) suggested the use of the 19 core competencies in curriculum will help develop students in this specific field.

Scheer, Harder, and Place (2011) conducted a study that compared and contrasted results from two competency modeling efforts; an extension education model and an Extension human resource management model. The researchers found that the 19 competencies in the academic
model were similar to 22 competencies in the Extension human resource management model (Scheer et al., 2011). This finding reaffirmed that Extension professional development and academic extension education agree on the knowledge, skills and abilities that extension personnel in the U.S. need in order to be successful in their job (Scheer et al., 2011). Comparing and contrasting the two models was informative as it led to recommendations for possible educational opportunities for students.

Namdar, Rad, and Karamidehkordi (2010) conducted research that investigated the professional competencies that are needed by Agricultural and Extension Program Evaluation staff and managers in the Iranian Ministry of Agriculture. The researchers concluded that the most frequent competencies that were reported were: (a) applying professional evaluation standards, (b) developing professional practice and remaining open to input from others, and (c) situational analysis and analyzing data (Namdar et al., 2010). Through their data analysis, the researchers were able to identify the highest rated professional competencies for their population within the following six areas: (a) professional practice, (b) situational analysis, (c) systematic inquiry, (d) project management, (e) reflective practice, and (f) interpersonal competence. The researchers stated that these main competencies should be the areas that the ministry focuses on when they offer training courses to their employees.

While many researchers have focused on competencies needed for extension personnel within specific countries, Davis and Sulaiman (2014) investigated the roles and capacities needed by individuals working in Extension and Advisory Services (EAS) worldwide. The researchers discussed the new roles and capacities needed by extension personnel in light of global challenges such as natural resource depletion and climate change (Davis & Sulaiman, 2014). According to the researchers, these new roles call for the emergence of the New
The researchers suggested functional and technical capacities are needed on the individual, organizational and environmental level. Capacities required at the individual level included: (a) community mobilization, (b) leadership, (c) critical thinking, and (d) self-reflection. Capacities required at the organizational level included: (a) structures, (b) relationships, (c) values and incentives, (d) human resources, and (e) processes, systems and procedures. Finally, capacities required at the environmental level included: (a) supporting organization of workshops, seminars, and joint research and, (b) managing relationships with media (Davis & Sulaiman, 2014).

Suvedi and Kaplowitz (2016) also took a global approach to understand which competencies extension agents should have to be successful in their job. Like Davis and Sulaiman (2014), the researchers claimed the roles and responsibilities of extension personnel falls within two broad categories: (a) process skills or functional competencies, and (b) technical skills. The researchers claimed in order to be effective extension personnel must be competent in both types of skills.

In addition to technical skills, the researchers claimed the processes skills extension personnel need are: (a) program planning, (b) program implementation, (c) program evaluation, and (d) communication and information technologies (Suvedi & Kaplowitz, 2016). It was concluded that in order to be successful amidst challenges, extension agents must develop their capacity within the aforementioned skills (Suvedi & Kaplowitz, 2016).

Social Capital

Within higher education, the impact of social capital on faculty success has been the studied. Cox (2004) stressed the importance of community engagement among faculty and the value of learning communities among faculty members. The researcher concluded that being part of faculty learning communities helps faculty create strong bonds, establish shared norms, and
engage in important scholarly activity together. Cox (2004) concluded that social capital as seen through faculty learning communities is a vital part of higher education because it benefits both the individual faculty and the institutions culture.

The notion of faculty engagement is further supported by Boice (2000), who argued being engaged in communities is important for faculty because it helps them learn norms and build trust within their relationships. The researcher concluded that new faculty who possessed social capital found success in his or her on campus duties. Etzkowitz, Kemelgor, and Uzzi (2000) also stressed the importance of social capital among faculty when they argued that social capital can help facilitate the exchanging of resources and learning among university faculty. Through their qualitative research, Etzkowitz et al. found both male and female faculty members in scientific fields experienced high career performance because of their social networks, or social capital. The researchers also found; however, women’s relationships provided “fewer of the tangible resources that are important for academic success” (Etzkowitz et al., 2000, p. 163).

The importance of social capital was further stressed through Lee’s (2016) work which stated social capital “helps knowledge transfer by mobilizing, accessing, and using knowledge resources and the efficient knowledge transfer ultimately leads to higher innovation performance of organizations” (p. 2). Through results from an online-based questionnaire, the researchers concluded social capital among faculty makes significant contributions to the success of their collaborative research efforts. Specifically, the researchers claimed faculty’s reputation, trust, and commitment helped to overcome cultural gaps present during collaborative research efforts (Lee’s, 2016, p. 7)

In observing the impact of social capital on faculty, Rezaee and Nabeiei (2015) observed the relationship between social capital and job satisfaction. The researchers carried out a cross-
sectional study interviewing 100 medical faculty members. Results from this research showed a positive relationship between job satisfaction and social capital (Rezaee & Nabeiei, 2015). The researchers concluded that there should be an investment in the development of social capital among faculty in order to increase their likelihood of being successful.

Similar to the present study, academics have also sought to measure levels of social capital among various populations around the world. Mitchell and Bossert (2007) conducted research measuring social capital in Nicaraguan communities. Using the World Bank’s Social Capital Integrated Questionnaire (SC-IQ) the researchers aimed to analyze levels of social capital indicators such as membership density and social trust within six poor communities in Nicaragua. Factor analyses was used to analyze the data of the 2882 participants. The researchers found that membership density and institutional trust were positively related to political engagement; however social trust was either not related or negatively associated. The findings of the researchers supported the idea that social capital is a complex, yet important concept to be studied.

Further research understanding of social capital could be found in the work of Rimaz, Nikooseresht, Vesali, Nedjat, and Asadi-Lari (2015). These researchers conducted research that studied factors that impact levels of social capital among HIV/AIDS positive Iranians. The researchers used the World Bank’s SC-IQ to collect data from a convenience sample of 300 Iranians in Tehran, the capital of Iran. Rimaz et al. found that variables such as ethnicity, age, and economic status had a significant impact on an individual’s level of trust. Furthermore, the researchers found that ethnicity and economic status had an overall impact on social capital.

Babaei, Ahmad, and Gill (2012) also conducted research focused on Iran. Their research aimed to determine the effect of social capital on the empowerment among squatter settlements

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in the capital of Iran, Tehran. The researchers used the SC-IQ to focus specifically on bonding, bridging, and linking social capital among a sample of 328 individuals who were randomly selected. Bonding, bridging, and linking social capital were measured by focusing on elements of trust. The results of the study showed that there were significant effects of bonding, bridging, and linking social capital among the sample (Babaei, Ahmad & Gill, 2012). Bonding social capital had the largest beta coefficient in comparison to the other types of social capital. This means there were higher levels of bonding social capital than other forms of social capital within the settlements in Tehran.

Another research that used the World Banks SC-IQ as the basis for measuring social capital was that of Sheingold and Sheingold (2013). Through their study the researchers aimed to measure social capital within work environment of nurses. Nine hospitals throughout the USA were selected, and a total of 1236 individuals provided responses for their study. Through their study, the researchers found five social capital factors among the nurses: (a) external trust, (b) participation, (c) internal trust, (d) social cohesion, and (e) conflict. Another major conclusion of this research was that social capital strongly correlates with job satisfaction and intention to stay in a job. Social capital, therefore, was correlated with outcomes that the researchers believed ought to be desirable within the nursing field.

With the rise in popularity of social capital, much research has been conducted in search of measuring social capital among various populations around the world. Although the present research only focused on the World Bank’s SC-IQ, other instruments have been created and used to investigate social capital. For example, Inglehart’s World Value Survey (Inglehart, 1997) has become a widely used social capital instrument. Inglehart’s World Value Survey (Inglehart, 1997) was created to specifically focus on elements of trust and membership in associations.
Knack and Keefer (1997) used Inglehart’s World Value Survey to show the relationship between trust and levels of investments in 29 countries around the world. Inglehart’s World Value Survey was the most appropriate instrument for Knack and Keefer’s study’s objectives.

Onyx and Bullen (1997), also developed a tool to measure social capital with the New South Wales Study. Focusing on data drawn from five Australian communities, the researchers expanding their investigation of social capital past just trust and membership. Onyx and Bullen (1997) focused their investigation of social capital on: (a) trust, (b) membership, (c) political engagement, and (d) tolerance of diversity.

Grootaert, Narayan, Nyhan Jones, and Woolcock (2004) continued to investigate social capital through their research. Grootaert et al. (2004) were able to create a conceptual framework that focused on structural and cognitive social capital on a household or individual level. Their survey focused on six main areas: (a) groups and networks, (b) trust and solidarity, (c) collective action and cooperation, (d) information and communication, (e) social cohesion and inclusion, and (f) empowerment and political action. Focusing on these six areas, the researchers claimed that their instrument could measure social capital in different contexts if adapted correctly. Grootaert et al. pilot tested their instrument in Albania and Nigeria. During these pilot tests they found this instrument could be successful if an individual adapts them to the context of the area.

Narayan and Cassidy (2001) also research, tested, and created an instrument that measured social capital. These researchers based their instrument on seven key dimensions: (a) group characteristics, (b) generalized norms, (c) togetherness, (d) everyday sociability, (e) neighborhood connections, (f) volunteerism, and (g) trust. The researchers concluded the two main dimensions of social capital that are consistently measured in major instruments are trust and membership in associations/participation in local community (Narayan & Cassidy, 2001).
Narayan and Cassidy claimed the key dimensions of social capital lead to economic outcomes such as political engagement, safety and security, empowerment, and social cohesion.

**Career Development**

Using the Motivation-Hygiene Theory as a framework, Strong and Harder (2009) investigated factors that influence extension personnel’s decision to remain in his or her career. The researchers found that salary, job stress, heavy work-loads, balancing work and family, other financial opportunities, and job dissatisfaction were factors that negatively impacted extension personnel retention (Strong & Harder, 2009). On the other hand, mentoring programs, training, staff development, accolades, and having support in the work place were motivators that positively influenced extension personnel retention (Strong & Harder, 2009). The researchers concluded, Extension should use the positive and negative factors found in the study as a guide for creating strategies to decrease extension personnel’s stress levels and job dissatisfaction over time (Strong & Harder, 2009).

Arnold and Place (2011) explored the influences that shape Florida extension agent’s employment decisions at different career stages. The researchers found that positive influences at the across all levels of the career development stages included: (a) personal traits, skills, and knowledge, (b) motivators, (c) support systems, (d) career growth opportunities, (e) collaboration, and (f) career management strategies. Negative influences across all stage levels included: (a) lack of direction, (b) job pressures, (c) personal work management issues, (d) mandated work requirements, (e) work issues, (f) salary disparity, (g) performance measures, (h) career overload, and (i) job dissatisfies. Arnold and Place (2011) suggested that further research should be conducted on the positive and negative influences career influences on extension personnel in other U.S. states and internationally.
Rennekamp and Nall (1993) also conducted research on factors that can positively influence career development for U.S. extension personnel. According to the researchers, employees at the entry stage benefit from: (a) peer mentoring programs, (b) professional support teams, (c) leadership coaching, and (d) job training. Employees at the colleague stage benefit from: (a) in-service education, (b) formal education training, and (c) service on committees or special assignments. Finally, employees at the counselor and advisor stage benefit from: (a) life and career renewal retreats, (b) mentoring and trainer agent roles, (c) assessment center for leadership, and (d) organizational sounding boards. The researchers concluded that these EAS should use the positive influences as organizational strategies to develop their employees.

Taking a more international approach, Singh (2015) claimed training and development opportunities contribute directly to the career development of extension personnel around the globe. Whether the institution is privately or publicly run, EAS institutions should offer trainings that “start with the identification of training needs through job analysis, performance appraisal, and organizational analysis” (Singh, 2015, para. 18). The researcher concluded extension agents need to be trained in (a) technological aspects, (b) human relations, (c) problem solving, (d) sensitivity towards disadvantaged groups, and (e) management in order to see have a positive influence on the career development of extension personnel (Singh, 2015).

Halim and Ali (2015) further confirmed training can positively influence extension personnel’s career development despite country context. The researchers stated that “deficiencies in knowledge, skills, and ability among extension personnel, particularly those of Asia, Africa, and Latin America, are remarkable” (Halim & Ali, 2015, para. 6). The researchers also pointed out that 39% of extension personnel around the world have only a secondary level education. Furthermore, 33% of extension personnel around the world have only an intermediate level of
education. Halim and Ali (2015) concluded that in-service training could have a positive impact on extension personnel which could leave EAS institutions with “longer tenured and most satisfied employees” (para. 6).

Instead of indicating specific areas for training, Halim and Ali (2015) claimed that EAS need to go through a planning phase that identifies the training needs of extension employees. There needs to be an analysis on the organization, individuals, groups, curriculum, and jobs (Halim & Ali, 2015). According to Halim and Ali (2015), EAS will be well informed and ready to select training methods after data is collected.

Despite the cultural context, in-service training has been identified as a major positive influence on career development among extension personnel around the world (Arnold & Place, 2011; Burke, 2002; Halim & Ali, 2015; Kutilek et al., 2002; Singh, 2015). According to Kantè, Moore, Akeredolu, Edwards, Frempong, and Moriba (2016), public, private, and Non-governmental EAS institutions around the globe should invest in trainings that upgrade the knowledge, skills and abilities of extension personnel, which will “prepare them to assume greater responsibilities in higher positions within EAS” (p. 7).

**Education in Haiti**

A critical step to understanding the AET system in Haiti is understanding the dynamics of education in Haiti. This section will survey literature on the education system in Haiti and the approaches that scholars suggest the country should take to improve the system. This part of the literature review demonstrates the large gaps in research that exists within the realms of education in Haiti. Relatively little research has been done within this sector (Sider, 2009). The present study aimed to fill in a missing gap and lay a foundation for understanding AET in Haiti by first describing the system.
Scholars have attributed Haiti’s fragile educational system in large part to the use of the French language as opposed to Haitian Creole in schools (Albert, 2014; Degraff, 2007; Dejean, 2010; Hebblethwaite, 2012). In his research, Dejean (2010) argued that although the Haitian constitution recognizes Haitian Creole as a formal second language in the country, it is not regarded as such in the classroom. The researcher argued that although Haitian Creole is the only language fully understood and spoken by every Haitian, French is the language of instruction in schools (Dejean, 2010). This logic is rooted in the notion that Haiti is a French-speaking nation, as outlined in the Haitian Constitution. In reality, only the elite minority, less than 5% of the Haitian population, are bilingual in French and Haitian Creole (Dejean, 2010).

Dejean (2010) further illustrated the monolingual culture in Haiti by providing specific examples of situations where Haitians would only speak Haitian Creole and the French language would be inappropriate. These situations include: the fields that are cultivated by Haitian peasants, rural markets, urban markets, prayer meetings and religious ceremonies, all sports venues, all cockfight arenas, all transportation stations, all service stations, and in all small private business such as dry cleaning, butcher, baking, and carpentry (Dejean, 2010). Most, if not all, informal sectors in Haiti call for the use of Haitian Creole and not French. Dejean argued that Haitian Creole is the language of the people. It is the language that dominates almost every sphere and sector, except for school and official political arenas, which makes it the ideal language to use within the education system.

Although much of the literature of the Haitian education system is focused on language being the main contributor to the fragile state of the Haitian education system and Haitian Creole being the answer to the current problems, research has been conducted that looks at other ways of improving the system, such as capacity development of the leaders (Hebblethwaite, 2012).
Sider (2014) researched the topic of school leadership from an international and comparative perspective. Sider’s (2014) study focused on the results of a Digital Mentoring Project (DMP), which involved two Canadian and eight Haitian principals. The goal of the project was to observe the interactions between the ten participants over the course of two years. They were provided with digital technology such as smartphones and tablet computers, and encouraged to share resources, collaborate and develop a greater sense of leadership. Sider recognized the fragile state of the Haitian education system and desired to see how the use of digital technologies and international mentorship could support educational leadership capacity building in Haiti.

Three themes emerged from Sider’s (2014) research. The first theme was collaboration and problem solving. The participants of the study engaged in online discussions with topics that were deemed important to them. Although some were more active than others, there was a significant level of collaboration among the ten participants. An example of the collaboration was the resources that were shared among the educators. They would frequently email curriculum goals, learning expectations, and other literature to each other. Another example of collaboration was seen through the way participants collaborated to plan several professional learning workshops. A participant emailed the other nine participants about hosting a professional development workshop for her teachers and soon her fellow participants emailed her ideas and resources as well as proposals to co-host the event.

Another theme that was adopted from Sider’s (2014) research was leadership practices. Participants reported they adapted their leadership practices because of their participation within the DMP. An example of this theme was seen though a participant who developed a budgeting spreadsheet for her school. This participant recognized that most school leaders in her country
did not have training in financial management, and would therefore, fail to budget for their annual expenses. The participant was able to take the electronic resources she received through the DMP and apply it to her school’s need. Through this program, the participant received a tool that would help strengthen the financial well-being of the school in which the participant worked.

Finally, a theme of local and cross-cultural learning emerged from the DMP (Sider, 2014). This mentoring program provided a platform for participants to learn across their borders. An example of this theme can be seen through a participant who recognized that in North America, educators have a culture of planning together and supporting each other’s professional ability. He realized the Haitian education system is not the same. As a result, the participant organized and implemented collaborative planning teams with his teachers. Through the North American example, this participant was encouraged to cultivate a culture of support and collaboration among his teachers. As a result, the participant’s teachers were able to collect French resources and share them among each other, so as to address the lack of resources and build collaboration within the team.

Through his research, Sider (2014) argued there should be more international and comparative research on school leadership and capacity development. The researcher’s study pointed to a need for capacity development among leaders within the Haitian education system and a need for increased technology use to bridge gaps. Although challenges remain in regards to a lack of resources, a lack of school oversight, and poorly educated teachers and principals, (Sider, 2014) argued that a good starting point is to build capacity of school principals. Sider (2014) stated, “Effective school leaders will develop and model a vision for educational change
in Haiti. They will also creatively and collaborative develop Haitian-made solutions to these challenges” (p. 85).

Jean-Marie and Sider (2014), also studied the education system in Haiti through the lens of educational leadership and capacity development. The researchers claimed that although there is research on educational leadership in the developing world, there is significantly less research on this topic on fragile nations such as Haiti. The emphasis of Jean-Marie and Sider’s (2014) work was capacity development because they believe that although it is not at the forefront of government and/or nongovernmental organizations priorities, it can significantly impact the education system. A qualitative research approach was taken in order to answer the research question: What types of leadership practices do school leaders in Haiti exhibit? The answered this question by examining the experiences of eight school principals in Haiti as they participated in a leadership program (Jean-Marie & Sider, 2014). Jean-Marie and Sider’s (2014) goal was to observe school leadership approaches outside of Western framework.

Three themes emerged from this study. The first theme as responsiveness to localized needs. Although principals throughout the West are responsive to localized needs, Haitian educational leaders have a distinct responsibility because they have to “often consider the needs of the local context without a policy framework implemented by a central education department” (Jean-Marie & Sider, 2014, p. 12). The second theme identified through Jean-Marie and Sider’s (2014) research was a commitment to educational change and improvement. This key attribute was found within all of the participants in the study. Participants went out of their way to make sure that their school was succeed even if they had to sacrifice. Participants demonstrated this commitment through the curriculum and workshops that they developed for the educators in their schools and regions. The third theme of the research was innovation in responding to challenging
contexts. Innovation was demonstrated through the practices that were used by the school leaders. These practices were not typically or traditionally implemented in Haiti. For example, a participant established a working group of educators to discuss how their school could be leaders in working with students with special needs. Another participant created a program that help send students to university if they promised to return back to the community and serve upon graduation. These innovative programs transformed the community the participants were in and helped to strengthen the education system.

Jean-Marie and Sider (2014) claimed “at the center of educational movements in fragile states such as Haiti, is cultivating local capacity to disrupt social indifference, lack of access, and neglect” (Jean-Marie & Sider, 2014, p. 13). Although many challenges remain within the Haitian education system, Jean-Marie and Sider’s (2014) believed that the capacity development of Haitian educators is the key to strengthening the education system. Jean-Marie and Sider’s (2014) research highlighted the opportunity to consider how leadership development and capacity development could impact education in the entire country.

**Agricultural Education and Training in Haiti**

It is now appropriate to address research on AET in Haiti. Bannister and Josiah (1993) conducted a study that addressed the training and extension system developed from an agro-forestry project in Haiti called Tree Project. The goal of the researchers was to describe the system that was the result of a ten-year program implemented by a private sector.

Tree Project was known as being a very successful project, which was attributed to the large scale and high percent of project resources that reach the participants. Bannister and Josiah (1993) provided information about the project design and evolution, the types of interventions that the project conducted, the structure and team organization, and the extension strategy of the project. This summary led them to an analysis of the strengths and weaknesses of the program.
One of the notable strengths of the program was the sheer amount of farmers that it reached. The program was considered a very large-scale program providing resources to many Haitian farmers on the ground. One of the main weaknesses was that the relationship between field staff and farmer did not reflect a relationship that was appropriate for reaching the agroforestry solutions. Because there was such a large number of farmers, the field staff would often provide agroforestry techniques as a set of lists as opposed to engaging in dialogue and relationship with the farmers. The farmers lacked an intimate understanding of their agricultural systems because of this teaching technique.

Bannister and Josiah’s (1993) summary of the agroforestry program concluded with an encouragement to continue improving the working relationship between the program’s field staff and NGOs as well as farmers. They argue that having a top-down approach to agricultural training in Haiti is not beneficial. Rather than this type of relationship, they propose that working together as partners and colleagues is the best way to improve agroforestry technologies in Haiti.

A study by Reinert and Voss (1997) surveyed rural grassroots organizations in Haiti and their role in the development of the country. The researchers claimed that rural grassroots organizations ought to be involved in the development process of the country if there is a serious desire to combat extreme poverty and environmental degradation in Haiti. Reinert and Voss (1997), defined rural grassroots organizations as those “based on peasant associations, church groups and rural NGOs” (p. 65). As it pertains to agricultural research, training and extension, these are the groups who engage in the agricultural sector with the goal of improving agricultural practices within the nation as a whole.

Through their study, Reinert and Voss (1997) affirmed agricultural research, training, and extension are critical to the development of rural Haiti. The researchers believed the only
way the country will move forward is if these organizations are involved in the formation and implementation of programs within the agricultural system. Reinert and Voss (1997) claimed that often, these groups have already conducted their own needs-assessments and possess the necessary organization networks in order to help improve the agricultural system.

All in all, Reinert and Voss (1997) argued that in order to see Haiti develop as a nation there needs to be an investment in rural grassroots organizations. Furthermore, the researchers argued there needs to be an investment in the organizational capacities of grassroots organizations that focus on agricultural research training and extension, health and education, micro-finance, erosion control, and non-farming activities (Reinert & Voss, 1997).

**Agricultural Education and Training in the World**

AET systems are studied in order to help the developing world strengthen their agricultural sector. The Innovation for Agricultural Training and Education (InnovATE) Project promotes sustainable food security, poverty reduction, and natural resource conservation by helping developing countries strengthen their AET system (Moore, Mutaleb, & Baharanyi, 2014). InnovATE utilizes a three-step “learn, design, train” process to help identify and disseminate effective AET strategies to increase institutional capacity and build human capital. In their research, Moore, Mutaleb, and Baharanyi (2014) found agriculture is essential to post-conflict development, poverty reduction, and peace building within Sub-Saharan Africa. The AET system, therefore, is crucial to the development of the countries within the area.

The researchers concluded opportunities for growth that can help strengthen the Sub-Sahara African AET system include: assistance for institutional capacity building, improved collaboration and partnership between AET providers, enhanced linkages within agricultural sectors, privatization opportunities, curriculum reform, new teaching strategies, alternative and transitional education models, and building upon success (Moore et al., 2014).
While Moore et al. (2014) focused on the African continent, Freer (2015) conducted research on AET systems around the globe. Through his research, Freer (2015) identified key disconnects within these AET systems. First, the researcher found that there is a disconnect with curriculum quality and relevance. At an institutional level, AET programs are marked by a decline in qualified faculty and/or educators and/or educators with low experience, coupled with student enrollment rates that exceed the institution’s capacity (Freer, 2015). The lack of qualified educators and over-enrollment set the stage for substantial gaps in AET relevance and quality. This could be seen through reports from Jordan that revealed faculty at the tertiary level had limited knowledge of employment opportunities, which lead them to focus on traditional preparation for government jobs (Freer, 2015). Furthermore, the majority of AET programs in developing countries do not offer valuable services such as career advising, internships, or job placement services. The researcher came to the conclusion that the quality of AET curricula and pedagogy were not where they needed to be in order to meet the current needs of the agricultural sector (Freer, 2015).

Another disconnect that was identified by the researcher was among the AET institutions (Freer, 2015). In many developing countries, AET institutions operate in isolation rather than as a system. One dilemma is that AET is not neatly classified; it is found in between agricultural and education policies, which makes it function without clear objectives. The lack of policies for AET systems and the disjointed curriculum creates the foundation for poor coordination among agricultural education providers within countries. According to Freer (2015) one of the ways this disconnect could be solved within the AET system would be to develop “a system-wide framework [to aid] in establishing institutional linkages within an AET system and [assist] educational leaders in forming explicit competencies for AET graduate employability” (p. 12).
Another disconnect is between training and skills. In many countries, there is a severe lack of communication between the educational institutions and the private sector, which causes weakness in information, capacity and incentives (Freer, 2015). Furthermore, the high student-instructor ratios within this system coupled with a lack of resources reduces the capacity of faculty to collaborate on or conduct research about local industry needs. Unfortunately, this means that the next generation of educators, extension agents, technicians, and researchers are not receiving the proper training they need to be efficient in their job. An example can be seen in Mozambique, where masters level students were found ill equipped and unable to conduct basic level research and data analysis. This leads to a vicious cycle of ill-equipped workers entering into the job force.

The final disconnect identified by Freer (2015) was among the smallholder farmers. In developing countries, it was found AET graduates are inadequately prepared to work with smallholder farmers as extension/advisory agents. One of the issues is that these graduates have little understanding of strategies to work with adult learners. Another barrier is found within the gender differences between farmers, the majority of which are women, and extension agents, the majority of which are men, in developing countries. There is a rising depend for extension agents to support the needs of local farmers, however, AET graduates are unable to meet these needs. Freer (2015) suggested AET systems must take on the task of adequately preparing extension agents to train smallholder farmers through capacity development in needed areas such as appropriate technology, value added processing, pricing and marketing, financial management, and entrepreneurship.

Another analysis of the AET system can be found in the research conducted by Davis, Ekboir, and Spielman (2008). Davis et al., (2008), examined how post-secondary agricultural
education and training in Sub-Saharan Africa contribute to the agricultural development of African countries. The authors focused on the AET system in Mozambique as a case study to understand the role of AET within the context of an agricultural innovation system. Davis et al. (2008) suggested AET systems, such as the one found in Mozambique, can be improved by strengthening the capabilities of organizations and professionals, changing organizational cultures, behaviors and incentives, and building innovative networks and linkages. The study concluded by claiming that educational approaches in Mozambique do not adequately develop the individual or organizational capacities within the agricultural sector. The system would benefit greatly from the suggested steps that were given.

USAID (2015) also spent considerable amounts of resources studying AET systems throughout the world including African and Asian countries. Although not every AET system is weak, in their research they identified general weaknesses within AET systems. These weaknesses include: (a) a division of responsibilities by isolated institutions that negatively impacts AET, (b) there is a lack of coherence in policy, (c) the links to the stakeholders are weak, (d) there is a poor image of agriculture, and (e) there is a weakness in subject areas. In an attempt to strengthen AET systems, USAID (2015) came up with strategies to combat these weaknesses. These strategies included investments in the following areas: (a) curricula, (b) faculty and staff, (c) infrastructure, (d) outreach and services, (e) student services, and (f) policy and administration.

**Overall Conceptual Model**

As mentioned in Chapter 1, the purpose of this study was to describe the AET in Haiti. The research objectives of this study were as follows:

1. Determine Haitian faculty’s perception of what competency areas should be focused on in order to ensure that their students are prepared to be successful extension workers upon graduation.
2. Identify how teaching at multiple institutions impacts social capital of faculty within the Haitian AET system.

3. Explore and describe influences on career development among extension personnel in Haiti.

Although these three critical pieces can stand alone as individual investigations, they came together to form one comprehensive investigation of the Haitian AET. By taking a GTS approach, this study sought to understand the AET system in Haiti by investigating capacity development components of three of the main players within the system, as outlined by this study’s objectives. Agricultural students, agricultural faculty, and extension workers were the three key players selected because they play a vital role in shaping the future of the entire system. The Haitian Government has identified a lack of capacity development as one of the key weaknesses prohibiting agricultural development in the country (Arias et al; 2013), which is why this research strategically focused on three main capacity components of these key players. Competency among students, social capital among faculty, and career development among extension workers are all three vital components that can contribute to building a robust and competent AET system in Haiti. Figure 1 provides a conceptual model that brings together all three studies.

Figure 2-1 depicts the Haitian agricultural sector as a stool. Every element in the figure plays an important role in the functionality of the stool as a whole. The seat of the stool represents the Haitian agricultural value chain. This value chain represents individuals who are directly involved with agricultural activities within the country. This value chain includes: producers, input suppliers, agroprocessors, exporters, and consumers. To some extent, every Haitian is represented by the seat because every Haitian is at least a consumer of Haitian agricultural products.
In order for Haitians within the value chain to benefit from agricultural production, they must be supported by an (AET) system. Education and training is an essential element of every part of the value chain from production to consumption. The Haitian AET system, therefore, is responsible for supporting agricultural development through training and education.

To illustrate the supporting role, the Haitian AET plays within Haiti’s agricultural sector, it is depicted as the legs of the stool, which provide balance and backing. These three legs form the support system for the entire stool. Without these three legs, the stool would not be able to function as it ought to. The Haitian AET system stand as a three pronged pillar, which provides essential stability to the entire sector. In Figure 2-1, agricultural students, agricultural faculty and extension personnel fill in this critical role. Informal education and other formal education opportunities such as primary and secondary schooling are also part of the Haitian AET system. This research, however only focused on three of the greatest contributors.

Each leg of the stool has bolts that help the leg function successfully. These bolts represent the capacity needs of key players within Haiti’s AET system. Students are in need of competency areas, faculty are in need of social capital, and extension personnel are in need of career development. While there are other bolts in this stool, the present research focused only on competency, social capital and career development.

Finally, this figure shows these three legs are interconnected by crossbars. These crossbars represent the connections that exist among the key players in Haiti’s AET system. Naturally, there is a connection among these three players because faculty teach students who become extension personnel. However, the relationship is more than just unidirectional. Extension personnel provide support to students through internships and guest lectures, and students soon become faculty. Faculty and extension personnel are interrelated because many
faculty become extension personnel and vice versa. In fact, many individuals are both faculty and extension personnel at the same time. These interconnected relationships are supported by GTS, which states that a system is defined by the interactions of the individual parts (Bertalanffy, 1968).

It is important to address the role of the Haitian government within Figure 2-1. Although the government is not identified as a fourth leg, the government plays a critical and supporting role within the Haitian AET system. This supporting role is interrelated and connected to formal and informal agricultural activities conducted in Haiti. For example, the Haitian government is tasked with regulating higher education throughout the country (Interuniversity Institute for Research and Development [INURED], 2010). The responsibility of regulating higher education in Haiti creates a system where the Haitian government is directly above agricultural students and faculty. One of the weaknesses of the Haitian government, however, has been its inability to provide overarching governance and regulation for private and public higher education institutions (INURED, 2010). The lack of governance provided by the Haitian government has resulted in the proliferation of unaccredited universities throughout Haiti. In fact, 67% of private higher education universities were not accredited and did not have permission to operate from the Haitian government in 2010 (INURED, 2010).

In addition to regulating higher education, the Haitian government is also tasked with leading agricultural development and extension services throughout the country (GFRAS, n.d.). The agricultural branch of the Haitian government is MARNDR. For over 25 years MARNDR has been responsible for “establishing agriculture sector policy, directing and coordinating public investments in the sector, coordinating the interventions of the different actors involved and ensuring a minimum of basic agriculture public services” (GFRAS, n.d., para 1). The policies
and interventions conducted by the Haitian government directly impacts extension personnel throughout the country.

Overall, the Haitian government is tasked with providing support and governance to individuals within Haiti’s AET system. In the analogy of the three-legged stool, the Haitian government can be seen as an inspector who oversees the activities of the stool’s legs. In the case of Haiti, this inspector is consistently absent and limited in his ability to provide adequate feedback and regulation.

Summary

GTS provided a framework by which this study investigated the Haitian AET system, which included an in-depth investigation of individual parts of the system (Bertalanffy, 1968). The key individuals within the Haitian AET system that were selected to be investigated included: agricultural students, agricultural faculty, and extension personnel. Specifically, this research looked to investigate the extension competency needs of agricultural students, levels of social capital among agricultural faculty and career progression pathways of extension personnel.

In order to investigate extension competency needs of agricultural students, this research used competency as a mid-level theory. Although competency is a concept that has had wide usage around the world, this chapter aimed to define and understand this concept (Mulder & Collins, 2006). Within the study of competency, can be defined as “a set of observable performance dimensions including individual’s knowledge, skills, attitudes, and behaviors, as well as collective team, process, and organizational capabilities, that are liked to high performance, and provide the organization with sustainable competitive advantage” (Athey and Orth, 1999). There are three main approaches to: (a) the behaviorist, (b) the generic, and (c) the cognitive (Mulder & Collins, 2006). With the behaviorist approach, competencies are achieved through training and development (McClelland, 1998). On the other hand, competencies are
achieved through identifying generic lists of core competencies and looking for those competencies within people (Mulder & Collins, 2006). Finally, the cognitive approach can be seen as an intelligence approach, where competencies are inherent within individuals and not drawn out by training (Mulder & Collins, 2006).

The second mid-level theory used to investigate the Haitian AET system was social capital. Specifically, social capital among Haitian agricultural faculty was investigated. Social capital is a concept that has gained wide popularity and acceptability within the academic arena and has quickly become one of the most popular everyday term rooting from sociology theory (Narayan & Cassidy, 2001; Portes, 1998). This concept can be defined as “networks, norms, and trust- that enables participants to act together more effectively to pursue shared objectives” (Putnam, 1995, p. 665). Social capital can be understood by look at it on a macro, meso and micro level. The present research observed social capital on a micro, or individual level (Woolcock, 1998).

Social capital can be further understood as a structural dimension (which facilitates social interaction), and the cognitive dimension (which predisposes individuals to act in a way that benefits society) (Svendsen, 2000). Furthermore, it could be understood through three types of social capital: (a) bonding social capital, or social capital among homogeneous groups, (b) bridging social capital, or social capital among heterogeneous groups, and (c) linking social capital, or social capital between individuals and individuals/ institutions with power (Putnam, 2000).

Finally, the career development of extension personnel was investigated. These individuals provide the support, training and education needed by Haiti’s farmers (Davis, 2008). The capacity of extension personnel is of great importance because they are the ones directly
impacting agricultural yields and production on a daily basis. With a growing and changing world, organizations and individuals have an urgent need to either grow or become obsolete (Rennekamp & Nall, 1993). Career development is a concept that allows an individual to develop within their careers in a positive way. Career development can be defined as the. Career development could be defined as, “the act of acquiring information and resources that enables one to plan a program of lifelong learning related to his or her work life” (Malone, 1984, p. 216).

In an attempt to understand career development, Dalton, Thomas and Price (1997) proposed a model with four stages: apprentice, colleague, mentor, and sponsor. Each of these four stages engaged individuals in distinct activities, relationships, and psychological experiences (Dalton, Thomas & Price, 1997) Rennekamp and Nall (1994) then used Four Stages of Professional Career Model for the context of Extension Education. Kutilek, Gunderson, and Conklin (2002) further developed the career development model of Rennekamp and Nall (1993) by consolidating the four stages into three. The stages in their work were entry, colleague, and counselor and advisor (Kutilek, Gunderson, & Conklin, 2002). This research used the model proposed by Kutilek et al. (2002) to investigate the career development pathways of Haitian extension personnel.

All in all, this chapter provided a basic framework for the three distinct but cohesive parts of this study.
Figure 2-1. Haitian Agricultural Sector
CHAPTER 3  
FACULTY PERCEPTIONS OF STUDENTS’ EXTENSION COMPETENCY NEEDS WITHIN HAITI’S AGRICULTURAL UNIVERSITIES  

Introduction  
Agriculture plays a fundamental role in securing economic growth and development within developing countries (United States Agency for International Development [USAID], 2015). According to the Food and Agriculture Organization [FAO] (2016), “Investing in agriculture is one of the most effective ways to reduce hunger and poverty, particularly in rural areas. Many countries that have consistently invested in agriculture are on track to achieving the first Millennium Development Goal of reducing by half the proportion of hungry people” (p. 1). Researchers, government officials, and international aid agencies have all come to the shared conclusion that agricultural development is a necessary prerequisite to securing the viability and prosperity of impoverished countries around the globe (USAID, 2015).

With the vitality of agriculture in mind, economically impoverished countries, such as Haiti, have strategically prioritized investments within the agricultural sector. Specifically, in the case of Haiti, government officials and international aid agencies have identified underinvestment in human capital as one of the key issues facing the agricultural sector (World Bank, 2015b). Extension services have “weak public sector capacity” (USAID, 2016, p. 1) due to underinvestment in the capacity of extension personnel. Human capital investments, therefore, have become one of the focuses of development efforts. In order for Haiti to secure economic growth and development, the country’s leaders have been looking to increase the capacity of individuals within the agricultural sector (World Bank, 2015b). As the economically poorest country in the western hemisphere, Haiti has much at stake (Arias, Leguía, & Sy, 2013).

The Haitian Agricultural Education and Training (AET) system has been at the heart of human capacity development investments in Haiti. The role of an AET system can be seen as
“the principle source of skilled human resources for agriculture and rural development” (USAID, n.d., p. 1). According to James (2016), AET systems are made up of “different levels of formal education, non-formal education, and informal education; various regulatory institutions and policies; extension agencies; and so on” (p. 1). Examples of AET systems include universities, institutes, vocational technical colleges, high schools, and farmer training centers (USAID, n.d.). In Haiti, the leading AET institutions are universities, the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR), and private and public organizations providing extension services to individuals around the country (Global Forum for Rural Advisory Services [GFRAS], 2016). Although the Haitian AET system has weaknesses, it has been seen as the future of the Haitian agriculture sector and the focus of many capacity development projects (USAID, 2015).

In 2016 there was very limited research on the human capacity development initiatives in Haiti’s agricultural sector. The present research aimed to fill in the gap by investigating the extension process competency area needs of university students within Haiti’s AET system, as perceived by faculty. Agricultural students are the future extension workers, policy makers, and MARNDR workers, which makes their capacity development crucial to Haiti’s future agricultural development. In order to ensure these students are equipped and ready to tackle the great problems in their sector they must be competent and ready. This research investigated the extension process competency areas that Haitian agricultural faculty feel they must focus on in order to develop prepared and successful students.

**Review of Literature and Theoretical Framework**

The concept of competency is a theory that continues to be used by institutions for the development of vocational and educational training around the world (Mulder & Collins, 2006). Consequently, this concept has garnered a plethora of definitions. The recent institutionalization
of competence has drawn many researchers to study this dynamic concept. In order to understand competence, it is necessary to explore the actual definition of competency. The definition of competency has evolved over time (Athey & Orth, 1999). McClelland (1973) first defined it as components of performance that are associated with “clusters of outcomes” (p. 15). This definition evolved to a more specific view that looked at knowledge, skills, abilities, and other characteristics that impact an individual’s performance (Athey & Orth, 1999). For the purposes of this research, competency can be defined as “a set of observable performance dimensions including individual’s knowledge, skills, attitudes, and behaviors, as well as collective team, process, and organizational capabilities that are liked to high performance and provide the organization with sustainable competitive advantage” (Athey & Orth, 1999, p. 216).

The present research uses the competency approach as the theoretical framework for analyzing the Haitian AET system. The competency approach to human development was first proposed by McClelland (1973). McClelland suggested the traditional practice of hiring potential employees based on intelligence alone was inappropriate. The researcher advocated for the practice of testing for competence rather than for intelligence. McClelland (1973) concluded that intelligence and aptitude tests should not be obsolete, but employers should search for competencies, or desired and observable behaviors as an alternate approach to traditional intelligence testing. Although this unconventional system of evaluating potential success went against the norm, McClelland (1973) adamantly pushed for a system that would assess individuals based on factors that impact actual job performance, as opposed to intelligence and trait factors (Athey & Orth, 1999).

According to McClelland (1998), the competency approach was built off of four main assumptions: (a) performance indicators should be measurable (b) criteria should assess
important life outcomes such as education (c) competencies assessed should reflect reality, and (d) recommendations for how to improve competencies should be explicit and made public. The competency approach allows for the potential of individuals to be evaluated based on factors that can actually be measured and that can truly impact job performance. This approach was revolutionary during its time because of the major shift it introduced. The major difference with the competency approach is that competencies can be learned and developed over time, as opposed to intelligence and other trait factors that are inherent from birth (Athey & Orth, 1999).

In understanding competency, Mulder and Collins (2006) outlined 9 dimensions that encapsulate the concept: (a) peripheral ability (as competency) verses core ability (as core competency), (b) contextual dissoluteness versus situational attachment of competence, (c) orientation of competence towards functions versus roles, (d) representation of competence in terms of knowledge versus ability, (e) focus of competence on behavior versus capability, (f) person versus system as a carrier of competence, (g) scope of competence as specific versus general, (h) learnability versus exchangeability of competence, and (i) performance orientation versus development orientation of competence (Mulder & Collins, 2006). The authors concluded that the concept of competence is multi-dimensional and much of the definition depends on the context of the user (Mulder & Collins, 2006).

Much research has been conducted on competency within the field of agricultural education and extension. Harder, Place, and Scheer (2010) conducted a study to determine the competencies that entry-level extension professionals in the U.S. would need in 2015. The researchers used a Delphi panel of nationally recognized Cooperative Extension experts to help them select the top competencies that would be needed by extension agents in the U.S. Harder et al. (2010) concluded that there are nineteen core competencies that entry-level extension
professionals need in order to be successful. There were two main groups identified: competencies relating to program development process and interpersonal skills (Harder, Place, & Sheer, 2010). Additionally, Harder et al. (2010) found that it is critical for extension professionals to have applied research skills, attain extramural funding, be grounded in technical/subject matter, and have volunteer development. The competencies that the researchers found were consistent with those proposed by Scheer, Ferrari, Earnest, and Connors (2006), who created the Ohio State Model. Specifically, (a) communication skills, (b) problem-solving, (c), cultural sensitivity, and (d) the ability to utilize technology were competencies consistent in the research of Harder et al. and the Ohio State Model.

Further research was conducted on extension personnel’s competency needs by Scheer, Harder, and Place (2011). The researchers compared and contrasted results from two competency modeling efforts: an Extension education model and an extension human resource management model. Scheer et al. found that the 10 competencies in the academic model were similar to 22 competencies in the Extension human resource management model (Scheer et al., 2011). This finding reaffirmed that extension professional development and academic extension agree on the knowledge, skills, and abilities that extension personnel in the U.S. need in order to be successful in their job (Scheer et al., 2011).

Namdar, Rad, and Karamidehkordi (2010) conducted research that investigated the professional competencies that are needed by Agricultural and Extension Program Evaluation staff and mangers in the Iranian Ministry of Agriculture. The researchers concluded that the most frequent competencies that were reported were: (a) applying professional evaluation standards, (b) developing professional practice and remaining open to input from others, (c) situational analysis, and (d) analyzing data (Namdar et al., 2010). Through their data analysis, they were
able to identify the highest rated professional competencies for their population within the following six areas: (a) professional practice, (b) situational analysis, (c) systematic inquiry, (d) project management, (e) reflective practice, and (f) interpersonal competence. They concluded that these main competencies should be the areas that the ministry focuses on when they offer training courses to their employees.

While many researchers have focused on competencies needed for extension personnel within specific countries, Davis and Sulaiman (2014) investigated the roles and capacities needed by individuals working in Extension and Advisory Services (EAS) worldwide. The researchers discussed the new roles and capacities needed by extension personnel in light of global challenges such as natural resource depletion and climate change (Davis & Sulaiman, 2014). According to Davis and Sulaiman (2014), these new and demanding roles call for the emergence of the “New Extentionist” (p. 1). The researchers suggested that this role consists of functional and technical capacities needed on the individual, organizational, and environmental level. Capacities required at the individual level included: (a) community mobilization, (b) leadership, (c) critical thinking, and (d) self-reflection. Capacities required at the organizational level included: (a) structures, (b) relationships, (c) values and incentives, (d) human resources, and (e) processes, systems and procedures. Finally, capacities required at the environmental level included: (a) supporting organization of workshops, seminars, and joint research and, (b) managing relationships with media (Davis & Sulaiman, 2014).

Suvedi and Kaplowitz (2016) also took a global approach to understanding which competencies extension agents should have to be successful in their job. Like Davis and Sulaiman (2014), the researchers claimed the roles and responsibilities of extension personnel falls within two broad categories: (a) process skills or functional competencies, and (b) technical
skills. The researchers claimed that the processes skills extension personnel need are: (a) program planning, (b) program implementation, (c) program evaluation, and (d) communication and information technologies (Suvedi & Kaplowitz, 2016). It was concluded that in order to be successful amidst challenges, extension agents must develop their capacity within the aforementioned skills (Suvedi & Kaplowitz, 2016).

Despite country context, there exists commonality among competency areas that are perceived as important to extension professionals around the globe. Researchers are in agreement that both functional and technical skills are needed in order for extension professionals to be successful in their job (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016). The most commonly reported functional skills presented in this literature review were: (a) critical thinking or problem solving, (b) communication, (c) technology, (d) self-reflection, and (e) program planning, implementation, and evaluation (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016).

**Purpose**

The purpose of this research was to determine Haitian faculty’s perception of what competency areas should be focused on in order to ensure that their students are prepared to be successful extension workers upon graduation. The objectives of this research were as follows:

1. Describe faculty opinions about the importance of extension competency areas.
2. Describe faculty opinions about the responsibility of their institution to teach extension competency areas.
3. Describe faculty opinions about student mastery of competency areas upon graduation.

**Methodology**

This research took a nonexperimental quantitative approach, in which the researcher identified variables and observed their relationship without manipulating the variables (Ary,
Jacobs, & Sorensen, 2010). The variables observed were perceived importance and perceived possession of competency areas by Haiti’s agricultural students. In essence, a competency based analysis was conducted in order to achieve the study’s purpose and objectives.

The population investigated was university faculty in Haiti. These faculty members were asked to report their perception of which competency areas were important and whether their students had mastered understanding of the competency areas upon graduation. During the timeframe of the data collection, Haiti’s higher education system was in a fractured state, where many institutions existed without official recognition from the Haitian government (Arias, Leguía, & Sy, 2013). In effect, the Haitian government was unable to identify the exact number of higher education institutions, which posed a critical challenge for this research. In order to achieve the purposes of this research and reach the target population, the researcher focused on the leading six Haitian agricultural universities recognized by the Haitian government.

These six agricultural institutions are members of a prestigious group of higher education institutions called the Caribbean Council of Higher Education in Agriculture (CACHE) (Caribbean Council of Higher Education in Agriculture, n.d.). This group is a network of regional public and private educational institutions “organized to enhance their contribution towards fostering human resource development for sustainable transformation of agriculture in the Caribbean” (CACHE, n.d., para 1). The six Haitian institutions follow the goals of CACHE as they strive to provide “excellence in agricultural education” (CACHE, n.d., para 2). The researchers focused on collecting a sample from these six institutions.

The six leading agricultural institutions in Haiti are as follows: Université d'Etat d'Haiti (UEH), Université Quisqueya (UNIQ), Université Caraïbe (UC), Université Episcopale d'Haiti (UNEPH), Université Notre Dame d’Haïti (UNDH), and American University of the Caribbean.
Of these six institutions, four are located in the nation’s capital, Port-au-Prince, including: UEH, UNIQ, UC, and UNEPH. The other two are located in Les Cayes, in southwest Haiti. UEH is the only public university of these institutions, the others are private.

In order to collect data on competency area perceptions, the lead researcher created a paper-based form to be filled out by agriculture faculty members. The lead researcher found no pre-existing instrument that would achieve the set purpose of the study, which made creating an instrument the best choice. The instrument was a one-page chart that consisted of four questions about extension competency areas. The four questions asked were as follows: (a) Rate how important you think it is for your students to gain competency in this area so that they will be successful in their future employment, (b) Is it your institution’s job to help students develop this competency area, (c) To what level do students possess competency in this area when they leave your institution, and (d) To what degree does your institution teach this competency? A chart was created to allow the informants to place a number value to represent their response next to each of the extension competency area.

The competency areas selected were created based on Davis and Sulaiman’s (2014) core competencies for individuals within the agricultural sector. Davis and Sulaiman (2014) suggested that this set of core competency areas is applicable for extension personnel around the globe, despite cultural differences. Because of the global application of Davis and Sulaiman’s (2014) work, these competency areas were appropriate for use by this study. For the purpose of this research, the 13 competency areas suggested by the Global Forum for Rural Advisory Services were edited and adapted for a survey format. For example, double-barreled competency areas were split. Instead of gender and youth issues being in one competency area, they were split. Program planning, implementation, and monitoring were also split in order to avoid asking
the informant many questions, while allowing for only one answer. Best practices in survey
design suggest that asking two or three questions in one question should be avoided at all times

The final 15 competency areas were listed vertically down the right side of the form, while the four questions were listed horizontally across the top of the form. A total of 60 boxes were formed to allow the informant to fill out a box that answered each question for each competency area. The form was written in French, to respect the francophone culture of the Haitian higher education system. It took each informant between 10-20 minutes to fill out the form.

Reliability and validity are essential components of a quantitative research design (Ary, Jacobs, & Sorensen, 2010). Reliability pertains to the consistency of results over time and validity pertains to whether the instrument measured what it intended to measure, ruling out all other reasons for the results collected (Ary et al., 2010). Internal consistency was established through a Cronbach’s alpha test. The Cronbach’s alpha for the questions on importance, responsibility of institution to teach, and students’ mastery of the competency areas were .9, .755, and .91, respectively. A Cronbach’s alpha of .70 or greater is commonly considered to be an acceptable measure of internal consistency when creating an index of reliability (Santos, 1999). Furthermore, a test-retest was conducted with four participants over the span of one week. A test-retest reliability coefficient of stability gave an estimate of the error of measurement for all four participants. Individually coefficient scores ranged from .8 to .91, but the total average score was .845, which is considered good reliability (Yu, 2015).

The validity of an instrument refers to how well it measures what it was set out to measure (Ary et al., 2010). A panel of experts from the University of Florida, the University of
Haiti, and extension workers in Haiti was used to help increase the external, content, construct, and face validity of the instrument. The expert panel evaluated the instrument to see (a) if the instrument was appropriate for the Haitian higher education context, (b) if the instrument design was appropriate, (c) if the instrument was comprehensive enough to collect all of the information needed to achieve the study’s objectives, and (d) if the instrument measured what it was intended to measure. Furthermore, pilot tests were conducted in order to increase survey validity while testing for expected completion time of the instrument. Several revisions of the instrument were completed, which lead to the final instrument.

A faculty member at UEH, Haiti’s oldest and most prestigious university, served as the faculty oversight for this research. The faculty supervisor was a professor and Director of Basic Sciences at UEH. The supervisor helped to establish an effective strategy for survey distribution. In order to facilitate the distribution of the surveys the dean of every institution was contacted via phone. After receiving an in-depth explanation of the study and a reference from the Haitian faculty supervising this research, the deans were asked to provide a list of all of the full-time faculty in their institution. All deans either provided a list of names containing all of their full time faculty members or agreed to send their full-time faculty the questionnaire themselves.

The distribution of this survey was conducted one of three ways. One way it was distributed was through the dean. The dean was sent the survey via email and asked to email their faculty the survey. The dean then emailed faculty an editable Word document with the consent form and survey and asked to return the completed survey and signed consent within 48 hours. A second way the survey was distributed was by email from the researcher. Most deans provided the researcher with the names, emails, and phone numbers of each of their fulltime faculty. Faculty were first called on the phone by the lead researcher and then sent a follow up
email with an editable Word document with the consent and survey. They were asked to return the completed survey and signed consent via email within 48 hours. A third way this survey was distributed was in person. The lead researcher went to each of the institutions in an attempt to reach nonresponding full-time faculty or deans. When full-time faculty were identified by the secretary or dean they were given a printed version of the survey, and asked to scan the completed survey and signed consent within 48 hours of receiving it. This three pronged method proved to be most effective for the Haitian context. Although there were difficulties, the lead researcher was able to successfully collect the data.

With the support of the United States Agency for International Development (USAID), the lead researcher was able to hire two research assistants that helped collect the data. Data was collected during June and July, 2016. This timeframe proved to be difficult since the faculty of the institutions were preparing for summer vacation. One school, UNEPH, was not in session because the faculty members were on strike. As a result, the lead researcher and research assistants were invited to off campus locations by faculty in order to collect the data.

There were 78 faculty invited to participate in this study. A total of 65 provided data for an 83.33% response rate. This included 24 respondents from UEH, 6 from UNIQ, 9 from UC, 5 from UNEPH, 10 from UNDH, and 11 from AUC. The majority of the respondents were full-time faculty, with the exception of 9 who were part-time. The part-time faculty were identified by the deans as individuals who would provide information that would help the researcher achieve the research objectives despite not working full-time.

The average faculty informant for this study was 25-45-year-old male with his Master’s degree. Most informants had been teaching for over 6 years, but had only been in their position for 1-5 years. This data shows that the informants were well educated and acquainted with the
Haitian education system. Over 35% of the informants had been an educator for over 16 years. It is noted that females only represented 2.9% of the sample.

Dillman et al. (2014) Tailored Design Method for Internet Questionnaires was used as a guide for collecting data. Although this research was not an online survey, much of the communication was established online. Five online reminders were sent in order to increase the response rate (Dillman et al., 2014). After two months of contacting the faculty members, the final response rate of 83% \((N = 65)\) was obtained. Five respondents opted out because of the personal nature of the questionnaire and two respondents were removed due to missing data, which reduced the total number of usable responses. Early and late respondents were compared in order to compare for non-response error. No significant differences existed between early and late respondents and competency areas (Lindner, Murphy, & Briers, 2001).

As for the data analysis of portion of this study, each informant was given a code based on his or her primary institution and the number by which his or her survey was received. For example, the first individual from UC was given the code, C1. The second individual was coded C2, and so on. Likewise, the first individual from UNEPH was given the code E1. The second individual was coded E2, and so on. This coding system allowed the lead researcher to organize the data.

To rank responses based on the objectives of the study, a weighted index was calculated. For each statement, a weighted score was derived by multiplying the frequency of responses from a Likert scale by relative weights. The weights given to each category for importance of competency areas were as follows: not important = 1, slightly important = 2, moderately important = 3, important = 4, and very important = 5. The weights given to each category for students being competent in the competency areas were as follows: not at all = 1, very little = 2,
somewhat = 3, and great extent = 4. Finally, frequencies were calculated to show the response of whether faculty felt it was their institution’s responsibility to teach the competency areas. The possible responses were yes or no.

Results

Objective 1

The first objective of the present research was to describe faculty opinions about the importance of extension competency areas. Table 3-1 shows the ranking of these competency areas based on the weighted scores. The weighted importance index had a range of 229 – 302, with higher scores indicating greater importance. The lowest ranking competency areas, as it pertains to importance, were: (a) adult learning, (b) gender issues in agriculture, (c) behavior change, (d) youth issues in agriculture, and (e) community organizing. Adult learning, the lowest ranking competency area, had the highest weighted score in the slightly important category and the lowest weighted score in the very important category.

The highest ranking competency areas were: (a) professional ethics, (b) agricultural system (c) agricultural entrepreneurship, (d) communication, (e) program implementation, and (f) leadership. Professional ethics, the highest ranking competency area as it pertains to importance, had the highest weighted score in the very important category. Also, agricultural system was the only competency area that faculty only selected moderately important or higher. All other competency areas had at least one faculty member who rated selected the not important or slightly important category.

Objective 2

The second objective of the research was to describe faculty opinions about the responsibility of their institution to teach extension competency areas. Table 3-3 displays the frequencies of faculty responses, either yes or no. The highest ranking competency areas, as it
pertains to responsibility of institutions to teach the competency area, were: (a) agricultural system (b) program monitoring and evaluation, (c) agricultural entrepreneurship, (d) communication, and (e) program implementation. The lowest ranking competency areas from lowest to highest were: (a) adult learning, (b) behavior change, (c) critical thinking, (d) gender issues in agriculture, and (e) adaption to change. Almost half of the faculty (n = 32, 49.23%) believed that it was not his or her institution’s responsibility to teach adult learning.

Objective 3

The third objective of the research was to describe faculty opinions about student mastery of competency areas upon graduation. The weighted index for mastery of competency area had a range of 64 – 229, with higher scores indicating greater mastery. Table 3-2 shows these results. The highest ranking competency areas, as it pertains to student mastery of the competency area, were: (a) agricultural system, (b) program implementation, (c) program planning, (d) program monitoring and evaluation, and (e) communication. Agricultural system’s weighted score in the great extent category, 172, was more than double every other weighted score in that category. In fact, the weighted score in the great extent category for agricultural systems was more than triple the weighted score for more than half of the other competency areas in this category.

The lowest rating competency areas were: (a) gender issues in agriculture, (b) adult learning, (c) behavior change, (d) critical thinking, and (e) youth issues in agriculture. Gender issues in agriculture had the lowest weighted score in the great extent category and the highest weighted score in the not at all category.

Overall Ranking

Table 3-4 provides a synthesis of the overall rankings for all of the competency areas as it pertains to all of the objectives. This data shows that the following five competency areas consistently ranked as the lowest 6 for all of the objectives: (a) gender issues in agriculture, (b)
adult learning, (c) behavior change, (d) critical thinking, and (e) youth issues in agriculture. Of the aforementioned competency areas, gender issues in agriculture, adult learning, and behavior change were consistently ranked in the lowest four positions for all objectives. The only competency area that was consistently ranked highly was agricultural system. For all objectives agricultural system was ranked either first or second.

Table 3-4 also shows that the biggest gap between importance and mastery of competency areas was with professional ethics. Out of 15 competency areas, professional ethics ranked first for importance. It is important to note that this competency area also had the highest weighted score in the *very important* category and 89.23% (n = 58) of faculty believed it was his or her institution’s responsibility to teach this competency area. Although this competency area was ranked highly for importance and institution’s responsibility, professional ethics was ranked eighth in student mastery. Likewise, agricultural entrepreneurship was ranked third in importance, but seventh in mastery. A total of 93.85% of faculty believed agricultural entrepreneurship was the responsibility of his or her institution to teach the competency area to students.

Table 3-4 shows that program monitoring and evaluation was ranked second for institution’s responsibility with 93.85% (n = 61) of faculty indicating that they believed his or her institution ought to teach this competency area. This competency area, however, was ranked eighth in importance. Conversely, leadership was ranked fifth for importance but ninth for institution’s responsibility.

Finally, Table 3-4 shows that program implementation and program planning were ranked second and third for student mastery, respectively. Program implementation, however, was ranked fifth in importance, and program planning was ranked seventh in importance.
Conclusion, Recommendations, and Implications

Overall Conclusions

Agriculture plays a fundamental role in reducing hunger and poverty in developing countries, which is why there is great importance in focusing on the capacity development of individuals within Haiti’s agricultural sector (FAO, 2016). The purpose of this research was to determine faculty perceptions of what competency areas should be focused on in order to ensure that their students are prepared and successful extension workers upon graduation. The data from this research provided insight into extension competency needs of students as perceived by Haitian faculty.

The first objective was to describe faculty’s opinions about the importance of extension competency areas. Results from this objective showed Haitian faculty believed that five competency areas were less important than the others. Although each country’s rankings of competency areas may vary based on its cultural and historical context, Davis and Sulaiman (2014) collaborated with an expert panel, the Global Forum for Rural Advisory Services (GFRAS) Consortium, to identify all of the competency areas in this study as critical for extension agents throughout the world. It was only after many in-depth discussions, debates, surveys, and webinars, that the GFRAS Consortium agreed on the necessity of the 15 competency areas presented to the Haitian faculty in this study (GFRAS, 2015). The low rankings of the five aforementioned competency areas, therefore, presents a clear dilemma for extension services in Haiti.

Haitian agricultural faculty are tasked with training and educating Haiti’s future extension professionals. The lack of perceived importance of competency areas that are viewed as critical to extension experts demonstrates that there is a divergence in opinion between Haitian faculty and extension experts. This divergence in opinion indicates that faculty may not have
adequate mastery in these competency areas themselves. Further researcher should be conducted to see if faculty lack capacity in the 15 competency areas. If this is the case, faculty are in need for professional development in order to be best equipped to train the future extension personnel in Haiti.

The divergence in opinion also indicates there may be a lack of emphasis in the curriculum design and pedagogy of the 15 competency areas that have been deemed necessary. A lack of emphasis of these competency areas could ultimately lead to extension students graduating without mastery of necessary competency areas. Without these competency areas Haiti’s extension personnel would be severely ineffective and unable to provide the necessary services Haitian farmers need (Davis & Sulaiman, 2014). In other words, without master of the 15 competency areas, Haiti’s’ EAS may not be as effective.

Gender issues in agriculture provides an example of how the lack of perceived importance of competency areas by Haitian faculty could negatively impact agriculture in Haiti. Gender issues in agriculture had the fourth lowest ranking in intuition’s responsibility, the second lowest ranking in importance, and the lowest ranking in student mastery upon graduation. At the same time, only 2 of the 65 respondents in this study were female (3.08%), which showed a highly disproportionate amount of men versus women at the university level. The disproportionate number of women in agricultural faculty positions may have contributed to bias in faculty responses. Specifically, with less women in faculty positions, respondents may have been disconnected to gender issues that impact the agricultural sector on a daily basis.

Furthermore, the disproportionate number of women in agricultural faculty positions does not align with the fact that Haitian women play a critical role within Haiti’s agricultural sector (Bell, 2016). Although many women do not have land titles, Haitian women are referred to as
"potó mitan," central pillars, of society because of their irreplaceable role on the farm and within the agricultural value chain (Bell, 2016). Although women are disproportionately underrepresented within higher education faculty, the majority of individuals working the land are women (Bell, 2016). This situation is mirrored across the globe as about half of all the world’s farmers are women (Goldberg, 2015). Without an understanding of gender issues in agriculture, it would be difficult for extension agents to know how to fully serve and support the majority of Haitian farmers, women. It is, therefore, necessary for extension students to have an understanding of this competency area.

Data from the first objective also showed what faculty perceived as the most important competency areas. The high ranking competency areas in this research are consistently identified as important for extension personnel; specifically, (a) program implementation, (b) communication, and (c) leadership (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016). These three competency areas all have a component of interpersonal connections, which indicates that faculty value interpersonal connections within extension services. Furthermore, the consistency among Haitian faculty and extension experts demonstrates that program implementation, communication and leadership may be areas of strength within Haiti’s EAS. Further research should be conducted to see if faculty’s perception are consistent with reality.

The second objective of this research was to describe faculty opinion about the responsibility of their institution to teach extension competency areas. Results from this objective showed that although the vast majority of faculty agreed that it was his or her institution’s responsibility to teach the competency areas listed, there was a high divergence of opinion on adult learning. Adult learning was the lowest ranked as it pertains to institution’s
responsibility to teach the competency area. Almost half of the faculty \(n = 32, 49.23\%\) did not believe that it was their institution’s responsibility to teach adult learning. This statistic poses yet another dilemma for the Haitian agricultural sector because of the importance of this competency area within the realms of extension services. Without an understanding of adult learning it would be difficult for extension personnel to plan and implement effective programs for their adult learners (Strong, Harder, & Carter, 2010). A lack of mastery of adult learning would only result in a perpetually ineffective extension system. The low rating of adult learning indicates that Haiti’s extension system is at jeopardy of being perpetually ineffective if faculty’s mindset translates into a lack of emphasis on adult learning curriculum and pedagogy.

The second lowest ranked competency as it pertains to institution’s responsibility was behavior change. This low ranking further illustrates that the effectiveness of extension programs in Haiti may be at jeopardy. Behavior change and adult learning are both essential to planning and implementing effective extension programs (Davis & Sulaiman, 2014). If those who are tasked with training future extension agents do not believe it is their institution’s responsibility to teach these competency areas, students are at risk of being severely underprepared to do their job upon graduation. If a Haitian faculty member does not believe it is his or her institution’s responsibility to teach behavior change and adult learning, her or she must identify where their students should gain mastery in these competency areas or the faculty put Haiti’s agricultural sector at great risk.

The third objective was to describe faculty opinions about student mastery of competency areas upon graduation. Gender issues in agriculture, adult learning, and behavior change were the three lowest competency areas as it pertains to student mastery upon graduation. The low ranking of these three competency area suggests that there is an interrelatedness between faculty
perception of importance, faculty perception of institution’s responsibility, and faculty perception of student mastery. Although student master of competency areas is based on the perception of faculty in this research, in reality, if faculty do not believe a competency area is important, it may impact his or her curriculum and pedagogy of the competency area. Ultimately, this can negatively impact a student’s ability to master the competency area.

If faculty have accurately identified extension competency areas that students are not mastering, this data shows great weaknesses within Haiti’s extension system. Without the low ranked competency areas in Table 3-2, extension students will be ill prepared to face the challenges within Haiti’s agricultural sector upon graduation. Furthermore, extension students will not be able to effectively fulfill their roles as change agents within Haiti’s extension services.

Objective three also provided data on the highest ranked competency areas as it pertains to student mastery. Among the top three competency areas are: (a) program planning, (b) program implementation, and (c) program monitoring and evaluation. While extension experts support the importance of these competency areas (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016), there is a disconnect between the high ranked and low ranked competency areas. A critical part of program planning and implementation within extension education is adult learning and behavior change. The ranking of these competency areas suggest that the quality of program planning and implementation is not as effective as it should be because extension personnel would need mastery in all three competency areas in order to create an effective extension program.

Finally, a synthesis of all three research objectives show that although faculty believed professional ethics and agricultural entrepreneurship were the two of the most important
competency areas, their students did not leave with a mastery of it as much as other competency areas. This gap provides the clearest indicator as to on which competency areas faculty should focus reforming in curriculum and pedagogy. Researchers such as Davis and Sulaiman (2014) confirmed that professional ethics and agricultural entrepreneurship are important for extension professionals, which means that if Haitian students are not mastering these competency areas, there needs to be reform. If students are mastering these competency areas, it would be beneficial to investigate why faculty believe students are not.

**Recommendations**

The competency approach is used to help increase capacity within individuals around the world (Mulder & Collins, 2006). Searching for competency as opposed to intelligence is an effective way to evaluate potential success in the workforce (McClelland, 1973). The competency approach provided an effective framework for this research to assess Haitian faculty perception of what competency areas should be focused on in order to prepare students to be successful extension workers upon graduation. Faculty perception on this matter provided insight that has practical implications that lead to practical recommendations.

First, there is high divergence between Haitian faculty perceptions and extension expert perceptions on the importance of extension competency areas. It is important to address the differing opinions on what competency areas are important for Haitian extension students to master. Using the 15 competency areas outlined by Davis and Sulaiman (2014), Haitian faculty should begin to engage in dialogue about the competency areas their students need in order to be successful. It is important to note that Haitian faculty may not have the capacity or professional experience to make a holistic decision on competency area needs of their students. Because faculty are not in consensus with extension experts on the importance of specific competency
areas, faculty may not know what they do not know. In other words, faculty may be trapped in being part of a broken system that lacks necessary resources to be effective.

In order to have a holistic view of competency area needs of extension students, one potential solution would be to assemble a council that leans on the knowledge and experiences of various types of key players. The council could be comprised of the following types of individuals: (a) faculty representatives from the six leading agricultural institutions; (b) extension student representatives from each institution; (c) extension personnel representatives from private, public, and nonprofit institutions; (d) farmer representatives; and (e) government representatives. This diverse council would be able to most appropriately guide discussions on what competency areas are needed for Haitian extension students to be effective in their future careers.

Government representatives would be key players within this council because they are responsible for regulating the policies and activities that directly impact extension personnel and farmers (Interuniversity Institute for Research and Development [INURED], 2010). Extension personnel and farmer representatives would also be key players because they are the most familiar with the challenges faced by farmers around the country. Finally, students would provide insight that government representative, extension personnel, faculty, and farmers could not provide.

Davis and Sulaiman’s (2014) list of necessary competency areas for extension agents should serve as a reference and resource for the council as the council creates a competency area list appropriate for the Haitian context. This list created by the council should also indicate which institutions are responsible for each of the competency areas.
To support the research objectives of this council, further research should be conducted on student, extension personnel, and farmer perception on what competency areas should be focused on. The same questionnaire that was given to the 65 faculty members of this study should be given to a sample of students, extension personnel, and farmers in order to see similarities and difference among the groups. This research could help further the discussion on student competency area needs among the members of the council.

The list of competency areas generated from the assembled council can be a guide for faculty at each of the institutions. This list of important competency areas should be crosschecked with undergraduate and graduate course listings, curriculum and educational opportunities offered to extension students. This research could provide a wealth of information as it pertains to curriculum reform needs within these institutions. Furthermore, pedagogy on these competency areas should be evaluated through classroom observations.

Data from this study showed that according to faculty, professional ethics and agricultural entrepreneurship are two competency areas that should be focused on in order to ensure student success. Curriculum and pedagogy of these two competency areas should be evaluated to determine what next steps faculty should take.

The present research may help faculty further because it lists the competency areas faculty believe students successfully master upon graduation. Faculty could use strategies they are already implementing with successful competency areas as a model for how they can reform weaker competency areas. Curriculum reform and pedagogy strategies used for agricultural system, for example, can be used as a model to help strengthen efforts to teach gender issues in agriculture. Because faculty are experienced with successfully teaching their students certain competency areas, it is entirely possible that they can continue to be successful with teaching all
other competency areas. For areas where faculty lack experience, faculty could seek out colleagues with the appropriate expertise for support.

**Implication**

All in all, in order to prepare students to fill in the new and challenging roles they must fill as the New Extentionist, functional and technical capacities must be obtained throughout students’ time at the university (Davis & Sulaiman, 2014). Results from this research show that in the case of Haiti, there must be a distinct emphasis on functional, or process capacities among Haitian extension students in order to best prepare students to be successful in their future roles. If faculty perception is accurate, adult learning, behavior, change, and critical thinking are three of the top functional capacities that are lacking among Haitian agricultural students upon their graduation.

Despite geographical location, agricultural extension around the globe plays a critical role in “promoting agricultural productivity, increasing food security, improve livelihoods and promoting agriculture as an engine of pro-poor economic growth” (International Food Policy Research Institute, 2016, para. 1). This research reaffirms that there ought to be significant investments in the capacity development of future and current agricultural employees. Globally, agricultural faculty members are key players because they are training the next group of leaders within the agricultural sector. This means that there ought to be a consensus of what competency areas are important so that they can ensure that they develop prepared and successful extension workers.
Table 3-1. Importance of Competency Area

<table>
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<tr>
<th>Competency Area</th>
<th>Not Important Weighted Score</th>
<th>Slightly Important Weighted Score</th>
<th>Moderately Important Weighted Score</th>
<th>Important Weighted Score</th>
<th>Very Important Weighted Score</th>
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<td>9</td>
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Note (N = 65)
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<th>Somewhat Weighted Score</th>
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<td>68</td>
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<td>14</td>
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<td>44</td>
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<td>64</td>
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Note: \( N = 65 \)
Table 3-3. Institutional Responsibility to Teach Competency Areas

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<th>Should your Institution Teach This Competency Area</th>
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<th>No (f)</th>
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</thead>
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</tr>
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<td>Program Monitoring and Evaluation</td>
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<td>Critical Thinking</td>
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<td>19</td>
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<tr>
<td>Behavior Change</td>
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</tr>
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<td>Adult Learning</td>
<td>33</td>
<td>32</td>
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</table>

Note: \( N = 65 \)
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<th>Competency Area</th>
<th>Mastery Rank</th>
<th>Importance Rank</th>
<th>Responsibility Rank</th>
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<td>1</td>
</tr>
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<td>Program Implementation</td>
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<td>Communication</td>
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<td>Leadership</td>
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<td>Youth Issues in Agriculture</td>
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<td>Gender Issues in Agriculture</td>
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Note \(N = 65\)
CHAPTER 4
SOCIAL CAPITAL OF FACULTY WITHIN HAITI’S AGRICULTURAL EDUCATION AND TRAINING SYSTEM

Introduction

Agricultural development is a necessary prerequisite to securing economic growth and a prosperous future for many developing countries (United States Agency for International Development [USAID], 2015; World Bank, 2015a). Diamond (2005) attributed societal success to countries’ agricultural development throughout the centuries. Because Agricultural Education and Training (AET) systems are an integral part of strengthening the agricultural sector, they have become a focal point for many international research projects and investments (USAID, 2016). Without these systems it is nearly impossible for a country to develop, which makes a strong AET system a vital prerequisite for securing a country’s economic growth and prosperity (Moore, Mutaleb, & Baharanyi, 2014).

Haiti is known as the economically poorest country in the western hemisphere and one of the poorest in the world (Arias, Leguia, & Sy, 2013). In 2015 Haiti’s per capita income was only one-tenth the Latin American average, which put its poverty on the level of that which is found in Africa (World Bank, 2015b). Along with these staggering levels of poverty, a severe lack of food security has continued to be rampant throughout the land (Arias et al., 2013). Food security can be defined as “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (World Health Organization [WHO], 2012, para. 1). With a population of over 10 million, 3.3 million Haitians are food insecure, which prohibits them from maintaining a healthy and active life (World Food Program [WHO], 2016).

Agricultural higher education institutions help to fight against food insecurity through their vital role within AET systems (USAID, 2011). Along with other institutions such as secondary and vocational schools, higher education provides an avenue for individuals to receive
formal education and training within the agricultural sector (InnovATE, 2016). Higher education institutions have a distinct role within the AET system. Whereas secondary and vocational schools prepare students on-farm work, higher education increases the capacity of students so that they can graduate and have off-farm employment, such as public sector administrators (FAO, 2013). Through higher education institutions, students increase in their capacity so that they are prepared to “succeed in increasingly knowledge-based rural economies linked to global supply chains” (FAO, 2009, p. 68).

Because of the vital role of higher education within Haiti’s AET system, the present research investigated levels of social capital, or personal connections, among faculty within Haiti’s AET system (Putnam, 1995). Haitian agricultural faculty are prominent figures offering training and education to future leaders within the Haitian agricultural sector, agricultural students (Interuniversity Institute for Research and Development [INURED], 2010). Because faculty are tasked with shaping the minds of the future leaders, the capacity of faculty can directly impact the future of the Haitian agricultural sector because. Not only do Haitian faculty need to be effective for their students, but there is also a need to meet the high demands of their job tasks (INURED, 2010). The higher education environment calls for faculty members to be innovative and responsive to complexities and challenges in order to be successful faculty members (Carpenter, Coughlin, Morgan, & Price, 2010). Specifically, in the case of Haiti, higher education faces severe challenges such as: (a) lack of research priorities and funding, (b) minimal faculty training, (c) insufficient libraries, (d) outdated curriculum, and (e) absence of overarching governance and regulation (INURED, 2010).

Social capital is a vital variable because it provides faculty an avenue to combat the challenges within higher education so they faculty can become more effective in their
occupation. According to Putnam (1995), through social capital faculty have access to information, resources and networks that can help them increase their effectiveness as educators. In a country where resources are already scarce, social capital can provide support that the institutions and the government is unable to. For example, an educator with high levels of social capital may turn to his or her social networks to find books, articles, and other resources on which to base his or her lectures. Likewise, this faculty may decide to collaborate with other faculty to offer resources to his or her students.

Social capital is an especially important variable among Haitian faculty because Haiti has a distinct phenomenon where most faculty in higher education work at more than just one institution in order to ensure financial stability. According to Dumay (2015), “majority of faculty members still have another full-time job that they combine with as many teaching opportunities as possible to enjoy a decent standard of living” (p. 2). Faculty are offered limited teaching opportunities because of a lack of funding. Ultimately, this lack of funding causes many faculty to teach at more than just one institution, which exposes them to increasing numbers of students, colleagues, and communities. Being exposed to more students, colleagues and communities gives faculty a distinct opportunity to increase their social capital. The present research, therefore, aimed to investigate if teaching at multiple institutions impacts levels of social capital among faculty.

**Review of Literature and Theoretical Framework**

Social capital is a concept that has gained wide popularity and acceptability within the academic arena and has quickly become one of the most popular everyday terms rooting from sociology theory (Narayan & Cassidy, 2001; Portes, 1998). Although social capital has gained popularity, attempting to understand and measure this concept is “inevitably tricky business” because it has been defined a plethora of ways (Narayan & Cassidy, 2001, p. 61). In order to
understand social capital, it is necessary to first briefly explore the history of this widely used term.

Despite its recent widespread popularity social capital does not embody a new idea or notion (Portes, 1998). The idea of social capital dates back to Durkheim’s (1893) contributions. In his work, Durkheim wrote about the positive impact that group life had on an individual’s life and the society as a whole (Portes, 1998). Social capital represented the advantages that came due to an individual’s social networks. Durkheim (1893) believed that social capital was an example of a nonmonetary form of capital that was an important source of power and influence in societies (Portes, 1998).

About 100 years after Durkheim (1893), Bourdieu (1986) became one of the first scholars to methodically analyze social capital. Bourdieu (1986) defined social capital in terms of the advantages that membership in a specific networks offer individuals. Specifically, Bourdieu (1986) said that social capital is “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (p. 248). Essentially, the researcher believed the advantaged offered to an individual through social networks are tied to economic capital and other privileges of the group. Because Bourdieu’s (1986) work was published in French it did not receive a very widespread attention in the English-speaking world; however, this work is still considered to be “one of the most theoretically refined among those that introduced the term in contemporary sociology discourse” (Portes, 1998, p. 3).

Building off the work of Durkheim (1893) and Bourdieu (1986), political scientist Putnam (1995), offered a definition of social capital that serves as the operational definition for the present study. According to Putnam (1995), social capital is the “networks, norms, and trust-
that enables participants to act together more effectively to pursue shared objectives” (p. 665). This definition focuses on the social connections, norms, and trust that lead to benefits for an individual. One of the underlying assumptions of this definition is that the more an individual connects with people, the more they trust them and vice versa (Putnam, 1995). Another underlying assumption of this definition is that social capital only exists when it is shared (Narayan & Cassidy, 2001).

It is important to note that social capital can be measured at various levels within a society including the macro, meso, and micro level (Woolcock, 1998). Narayan and Pritchett (1997) referred to the various levels of social capital as three different streams. According to Woolcock (1998), the macro level of social capital pertains to the networks, norms, and trust on the national level. The meso level refers to the institutional level and the micro level refers to individuals/households/neighborhood level. The distinction between these three levels must be made clear in any measuring of social capital. The current research focused on social capital on the micro, or individual level.

The concept of social capital can be further separated into two parts for measurement: (a) the structural dimension and (b) the cognitive dimension (Svendsen, 2000). According to Svendsen (2000) the structural dimension facilitates social interaction, which is different from the cognitive dimension, which predisposes individuals to act in a way that benefits society (Svendsen, 2000). Trust, for example, would be classified within the cognitive dimension because trust predisposes individuals within a society to act in a specific way. Networks and norms could be seen as structural dimensions because these concepts facilitate social interactions among individuals within a society. Measurements of social capital should include both the structural and cognitive dimensions in order to capture a holistic view of the concept.
Finally, in order to measure social capital, it is necessary to understand the differences between the three types of social capital: (a) bonding, (b) bridging, and (c) linking (Putnam, 2000). Bonding social capital tends to “reinforce exclusive identities and homogeneous groups” (Putnam, 2000, p. 3). Bonding social capital connects individuals who are similar to each other. This type of social capital is the “sociological superglue” (Putnam, 2000, p. 3) of society as it works to strengthen social reciprocity and solidarity. On the other hand, bridging social capital “connects individuals who are diverse” (Putnam, 2000, p. 3). According to Putnam (2000), bridging capital can be compared to a “sociological WD-40 lubricant” (p. 3). Bridging social capital works to link communities and individuals to resources, information, and connections. Community members can have both of the aforementioned social capitals, but they usually do in varying amounts (Putnam, 2000).

Larsen, Harlan, Bolin, Hackett, Hope, and Kirby (2004) commented on the differences between bridging and bonding social capital when they said that “all forms of social capital are not equal and important difference exist between bonding social capital and bridging social capital” (p. 65). For example, bridging social capital can be a more powerful form of social capital because it provides individuals with the opportunity to connect with heterogeneous groups that may have more access to resources, information and connections that close family and friends may not have. Bonding social capital, on the other hand, may not be as fruitful in providing these advantages. Although bonding social capital may not provide access to resources, information, and connections it is a necessary perquisite to developing bridging social capital (Larsen et al., 2004).

Granovetter (1973) also investigated the differences between strong, or bonding, networks and weak or bridging networks. Granovetter argued that people with higher bridging
social capital have a greater chance of receiving benefits due to the nature of the weak ties they have. Weak ties often provide access to information and connections that lead to mobility and opportunities. On the other hand, individual with higher bonding, or strong ties, have less opportunity because they are only exposed to the information and networks of close ties. The information and networks of close ties often does not vary much from what an individual may already have access to (Granovetter, 1973). Granovetter’s work emphasizes the importance and function of weak ties.

The final type of social capital is linking social capital (World Bank, 2001). This describes an individual’s ability to engage with external agencies or groups to influence their policies or obtain useful resources (Pretty, 2003). Linking social capital is often seen as an extension of bridging social capital, except instead of being horizontal connections with heterogeneous groups, it is a vertical connection (World Bank, 2001). Linking provides an individual the opportunity to connect with organizations or groups that can provide many resources that they would not have otherwise had.

Social capital was the variable of interest for this research because despite how one measures or categorizes it, academics agree that it can result in benefits for individuals and institutions both (Carpenter et al., 2010, p. 213; Ferren, Kennan, & Lerch, 2001; Putnam, 1995; Woolcock & Narayan, 2000). Ferren et al. (2001) argued that social capital is equal to other assets such as financial and human capital in higher education. In its best form social capital is a beneficial component of higher education institutions because it contributes to economic, social, and political development. Social capital is able to contribute to society by: (a) encouraging the sharing of information, (b) discouraging opportunistic mindsets and behaviors, and (c) facilitating collective decision making (Woolcock & Narayan, 2000). Furthermore, research on
social capital shows that “highly connected employee relational networks are more creative, effective, and exhibit higher member satisfaction” (Carpenter et al., 2010, p. 213).

In regards to higher education advantages of social capital include improvements in effectiveness of institutions (Aldridge et al. 2002; Putnam et al., 1993), improvements in the quality and accessibility of education (Putnam et al., 1993), improvements in educational attainment (Aldridge et al., 2002), improved problem solving (Putnam et al., 1993), and reduced problems such as violence and free-riding (Putnam et al., 1993). Increased levels of social capital among Haitian agricultural faculty could be used as a powerful tool to improve the quality of education that agricultural students are receiving in Haiti. For this reason, the present research sought to measure levels of social capital in order to see if agricultural institutions are benefiting from the need to have faculty work at multiple institutions throughout the school year.

It is important to note that social capital may have negative effects. The same mechanisms that are used to provide advantages and benefits to individuals through social capital can also produce negative effects if there is not a balanced amount of bonding, bridging and linking social capital (Aldridge et al., 2002). Negative effects can include: (a) fostering behavior that worsens performance, (b) creating a barrier to social inclusion and social mobility, (c) dividing communities, (d) facilitative negative behavior such as crime, and (e) educational underachievement (Aldridge et al., 2002). An example of the negative effects of social capital can be a faculty member who stays within his or her tight bonding network but does not allow other faculty to join his or her tightknit group. Although there may be negative effects of social capital, this research focused on the positive benefits of having a balanced amount of social capital.
Similar to this study, other researchers have sought to measure levels of social capital among various populations. Mitchell and Bossert (2007) conducted research measuring social capital in Nicaraguan communities. Using the World Bank's Social Capital Integrated Questionnaire (SC-IQ), Mitchell and Bossert (2007) aimed to analyze levels of social capital indicators such as membership density and social trust within 6 poor communities in Nicaragua. The researchers found that membership density and institutional trust were positively related to political engagement, however social trust was either not related or negatively associated. Mitchell and Bossert’s (2007) findings supported the idea that social capital is a complex, yet important concept to be studied.

Likewise, Rimaz, Nikooseresht, Vesali, Nedjat, and Asadi-Lari (2015), conduct research that studied factors that impact levels of social capital among HIV/AIDS positive Iranians. The researchers used the World Bank’s SC-IQ to collect data from a convenience sample of 300 Iranians in Tehran, the capital of Iran. Rimaz et al. (2015) found that variables such as ethnicity, age, and economic status had a significant impact on an individual’s level of trust. Furthermore, the researchers found that ethnicity and economic status had an overall impact on social capital.

Babaei, Ahmad, and Gill (2012) also conducted research on social capital in Iran. The researchers aimed to determine the effect of social capital on the empowerment among squatter settlements in the capital of Iran, Tehran. Babaei et al. used the SC-IQ to focus specifically on bonding, bridging and linking social capital among a randomly selected sample of 328 individuals. Bonding, bridging, and linking social capital were measured by focusing on elements of trust. The results from the study showed that there were significant effects of bonding, bridging, and linking social capital among the sample. Bonding social capital had the
largest beta coefficient in comparison to the other types of social capital, which means that bonding social capital was the highest.

Sheingold and Sheingold (2013) also used the World Bank’s SC-IQ as a basis for measuring social capital. Through their study, the researchers measured social capital within work environment of nurses. Nine hospitals throughout the USA were selected, and a total of 1236 individuals provided responses for their study. The researchers found five social capital factors among the nurses including: (a) external trust, (b) participation, (c) internal trust, (d) social cohesion, and (e) conflict. One of the major conclusions of this research was that social capital strongly correlated with job satisfaction and intention to stay. Social capital, therefore, was correlated with outcomes that the researchers believed ought to be desirable within the nursing field.

**Purpose**

The purpose of the present study was to identify how teaching at multiple institutions impacts social capital of faculty within the Haitian AET system. The objectives of this research were as follows:

1. Determine if an association exists between bonding, bridging, and linking social capital and the number of institutions faculty work at. If so, describe the association.

2. Explore faculty reasons for teaching and perception of how the number of institutions they teach at impacts their social capital.

**Methodology**

This research took a mixed methods approach. A mixed methods approach is one that borrows from both qualitative and quantitative approaches in order to most effectively investigate a phenomenon (Creswell, 2013). This approach is most appropriate when the research problem at hand is complex with various levels. The mixed method approach takes a pragmatic viewpoint which claims that worldviews and methodology come secondary to investigating the
phenomenon (Creswell, 2013). This research, therefore, used both quantitative and qualitative questions on a questionnaire in order to best address each objective.

The quantitative portion of this study followed a correlational, non-experimental design in order to achieve the set purpose of identifying how teaching at multiple institutions impacts social capital. This type of design was most appropriate for analyzing the relationship between variables (Shadish, Cook, & Cambell, 2002). The independent variable, number of institutions taught by Haitian Agricultural faculty, was present prior to the commencement of this research. The lead researcher utilized a paper questionnaire in order to measure the dependent variable, the levels of social capital among Haitian Agricultural faculty. The qualitative portion of this study consisted of open ended questions about the impact of teaching at multiple institutions as perceived by Haitian faculty. These questions were designed to supplement and further inform the information in the quantitative portion of the study.

The population of this study was full-time agricultural faculty in Haiti. During the timeframe of data collection, Haiti’s higher education system was unable to identify every operating agricultural education institution because many institutions existed without official recognition from the Haitian government (Arias, Leguía, & Sy, 2013). As a result, the Haitian government was not able to number the exact amount of agricultural higher education institutions in the country. This posed a critical challenge for this research. In order to achieve the purposes of this research the leading six Haitian agricultural institutions in the country were used as the population frame for the study.

The six leading agricultural intuitions in Haiti are members of a prestigious group of higher education institutions called the Caribbean Council of Higher Education in Agriculture [CACHE], CACHE, n.d.). According CACHE (n.d.), regional public and private educational
institutions use this organization to organize and “enhance their contribution towards fostering human resource development for sustainable transformation of agriculture in the Caribbean” (CACHE, n.d., para 1). CACHE organizations all strive to “excellence in agricultural education” (CACHE, n.d., para 2). The researcher focused on collecting a sample from the six institutions that are a part of CACHE because they were recognized by the government and represented some of the best agricultural institutions in Haiti.

The six leading agricultural institutions in Haiti include: Université d'Etat d'Haiti (UEH), Université Quisqueya (UNIQ), Université Caraïbe (UC), Université Episcopale d'Haiti (UNEPH), Université Notre Dame d’Haïti (UNDH), and American University of the Caribbean (AUC). Of these six institutions, four are located in the nation’s capital, Port-au-Prince, including; UEH, UNIQ, UC, and UNEPH. The remaining two institutions are located in Les Cayes, a city in southwest Haiti. UEH is the only public university of these institutions, the other five are private.

The researcher used a paper questionnaire to measure levels of social capital among faculty at these institutions. The instrument was adapted from the World Bank’s (2003) Measuring Social Capital Integrated Questionnaire (SC-IQ). The SC-IQ was edited to fit the Haitian context. The SC-IQ was originally used by the World Bank to measure social capital in rural areas around the world. This instrument was designed by researchers, evaluators, and managers of projects and programs with the purpose of providing “a core set of survey questions for those interested in generating quantitative data on various dimensions of social capital” (Grootaert, Narayan, Jones, & Woolcock, 2003, p. 1). Each question selected in the SC-IQ was drawn from prior survey work on social capital “where it has demonstrated its reliability, validity, and usefulness” (Grootaert et.al., 2003, p. 1). The core questions adopted from the
World Bank has been subject to extensive input and critique from expert advisors and has been tested in the field on various occasions. This study used existing instrument that has substantial evidence of that support the reliability and validity of the instrument in a variety of populations. Using this a well-tested instrument like the SC-IQ ensured that this study’s instrument was reliable and valid (Kimberlin & Winterstein, 2008).

The researcher adapted the core questions in the SC-IQ to the Haitian context in order to ensure that all questions were appropriate for Haitian faculty (Grootaert et.al., 2003). Next, an expert panel of Haitian faculty members, University of Florida faculty members, and Haitian researchers examined the instrument for content validity. A total of 18 edits were made to the instrument, which left the total number of questions as 33. The instrument was then professionally translated into French, one of the official languages of Haiti and the official language of academia within the country. Next, instrument was piloted by Haitian faculty and researchers. After piloting the instrument, it was estimated that faculty members would take between 15-30 minutes to complete the survey, which was accurate.

The instrument was divided into seven sections. The first section asked the informant general information questions such as gender, age, highest level of education, and years teaching at the institution. This demographic question was critical for the descriptive statistics that would be used later. This section also contained a qualitative portion that asked questions about the number of institutions the faculty member taught at and the reason for teaching at one or multiple institutions. The next six sections of the survey were categorized by the six broad dimensions of social capital: (a) groups and networks, (b) trust and solidarity, (c) collective action and cooperation, (d) information and communication, (e) social cohesion and inclusion, and (f) empowerment and political action. The World Bank (2003) created these six dimensions based
on the vast literature that outlined core components of social capital. Elements of bridging, bonding, and linking social capital were reflected in the six sections.

Certain questions were selected to represent bonding, bridging, and linking social capital among faculty. Academics measure bonding social capital by the number of groups, organizations, networks or associations an individual has membership in. In order to measure group membership, the questionnaire asked faculty members, “How many groups, organizations, networks or associations do you belong to?” Further questions pertaining to bonding social capital asked about their monthly participation in activities for their groups and the amount of close friends they had.

Bridging social capital goes across boundaries and connects heterogeneous groups. Unlike bonding social capital, which reinforces homogenous groups, it allows for people with differences to connect. To measure this, the questionnaire asked if faculty had individuals of the different religion, gender, race, occupation, and educational background within the groups they were a part of. Bridging social capital was also measured through asking generally how many times faculty make and receive a phone call per week.

Linking social capital “describes connections with people in positions of power and is characterized by relations between those with a hierarchy where there are different levels of power” (Putnam, 1995, p.12). This type of social capital was measured by asking faculty about the trust they had in national and local government.

To further understand the impact of working at multiple institutions on social capital, the questionnaire asked faculty members two open-ended questions. The first question was “Why do you teach at multiple agricultural institutions?” The second question was “How do you think teaching at multiple institutions impacts the networks and relationships you have?”
The dean of every agricultural institution was contacted and asked to help facilitate the distribution of the questionnaires. The deans were given an in depth explanation of the study and then they were asked to provide a list of all of the full-time faculty at their institution. The deans responded well. All deans either provided the lead researcher with a list of names of the full time faculty or agreed to send faculty the questionnaire themselves. The questionnaire was distributed one of three ways. A common route of distribution was through the dean of agriculture at the institution. The dean was sent survey via email and then sent faculty an editable word document with the questionnaire. Faculty were asked to return the completed survey and signed consent within 48 hours.

Secondly, the survey was distributed directly from the researcher. Many deans provided the researcher with the names, emails, and phone numbers of their faculty. Faculty were called on the phone and then sent a follow up email. The email contained an invitation to participate along with an editable word document with the questionnaire and consent form. Faculty were asked to return the completed survey and signed consent via email within 48 hours. The third and least common way this survey was distributed was in person on campus. By invitation from the deans, the lead researcher went to each of the institutions in an attempt to reach nonresponding fulltime faculty or deans. When the secretary or dean identified faculty who did not fill out the survey, these faculty were given a printed version of the questionnaire along with a consent form. Faculty were asked to scan the completed survey and signed consent within 48 hours of receiving it. This three pounced methodology proved to be most effective for the Haitian context.

This research was partially supported by the United States Agency for International Development (USAID). Through this support the lead researcher was able to hire two research assistants who helped to collect the data. Data was collected during June and July, 2016. It was
difficult to collect data during this timeframe because faculty and students around Haiti were preparing for summer vacation. UNEPH had a closed campus because faculty were on strike. In order to collect the questionnaires from these faculty, the lead researcher and research assistants were invited to off campus locations to collect the data.

There were 78 faculty invited to participate in this study. A total of 65 provided data for an 83.33% response rate. This included 24 respondents from UEH, 6 from UNIQ, 9 from UC, 5 from UNEPH, 10 from UNDH, and 11 from AUC. The majority of the respondents were full-time faculty, with the exception of 9 who were part-time. The part-time faculty were identified by the deans as individuals who would provide information that would help the researcher achieve the research objectives despite not working full-time.

The average faculty informant for this study was 25-45-year-old male with his Master’s degree. The average faculty had been teaching for over 6 years but had only been in their position for 1-5 years. Over 35% of the informants had been an educator for over 16 years. It is noted that females only represented 2.9% of the sample.

A critical description of this sample lies within the distribution of faculty who taught at multiple institutions. Of the sample, 33.85% (n = 22) taught at one institution. Another 29.23% (n = 19), taught at two institutions. Finally, the largest group of faculty taught at 3 or more institutions, 36.92% (n = 24). This distribution shows that most Haitian faculty teach at multiple institutions.

Dillman et al. (2014) Tailored Design Method for Internet Questionnaires was used as a guide for collecting data. Five online reminders were sent in order to increase the response rate (Dillman et al., 2014). After two months of contacting the faculty members, the final response rate of 83% (N = 65) was obtained. Five respondents opted out of completing the questionnaire
because of the personal nature of some of the questions. Furthermore, two respondents were removed due to missing data, which reduced the total number of usable responses. Early and late respondents were compared in order to compare for non-response error. No significant differences existed between early and late respondents and levels of social capital (Lindner, Murphy, & Briers, 2001).

As for the data analysis of portion of this study, each informant was given a code based on his or her primary institution and the number by which his or her survey was received. For example, the first individual from UC was given the code, C1. The second individual was coded C2, and so on. Likewise, the first individual from UNEPH was given the code E1. The second individual was coded E2, and so on. This coding system allowed the lead researcher to organize the data.

For the qualitative portion of this study, open coding was used to conduct a thematic analysis with responses from informants (Merriam, 2009). Through this process, each line of the interview was coded based on general categories identified through the interviews (Merriam, 2009). Categories and subcategories were then constructed based on the codes that were identified. Analytical coding was used to interpret and reflect on the meaning of the categories identified (Merriam, 2009). When coding was complete the lead researcher set aside the data and recoded the transcripts one week later in order to establish dependability of the data. By the end of the coding process categories formed key themes that captured recurring patterns of the data (Merriam, 2009). After themes were created they were translated from Haitian Creole to English.

The rigor of this research was established using Lincoln and Guba’s (1985) concept of trustworthiness, which includes four elements: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). To establish credibility, the lead researcher used
triangulation of the information, and of the investigator. There was regular communication between the lead researcher, research team, and experts in the field. Member check was also used in order to ensure that the data collected accurately depicted the thoughts and reflections of the informants. Three informants were called within two weeks of having an interview in order to thank him or her for his or her time, but also to receive feedback on some of the responses he or she gave. No changes were made because the informants confirmed the accuracy of the data. The lead researcher also used peer debriefing with the research team and experts in the field in order to ensure that the truth-value concern was addressed in the research.

In order to establish transferability, the lead researcher provided thick descriptions of the methodological process and used purposive sampling in selecting the informants. To establish dependability, the lead researcher kept an audit trail that included the raw data, notes, and drafts of findings of this study. The lead researcher also used a code-recode strategy to ensure dependability (Ary, Jacobs, Sorensen, & Walker, 2013). Through this strategy the transcripts were coded, left alone for 10 days, and then recoded. The two sets of data were compared to ensure consistency. This strategy ensures that the results could be repeated with consistency if research was repeated with the same participants in the same in the same condition (Ary, Jacobs, Sorensen, & Walker, 2013). Finally, confirmability was established through the use of a reflexive journal, which included the weekly reasoning behind all methodological decisions made by the lead researcher.

For the quantitative portion, SPSS 22.0 was used to generate frequencies and percentages in order to describe the sample (Gall, Gall, & Borg, 2007). Cross tabulation was then used to provide frequencies that describe the association between bonding, bridging, and linking social
capital and the number of institutions faculty work at. Kendall’s tau-c and Cramer’s V were used to determine the strength of the association.

**Results**

**Bonding Social Capital**

Cross tabulation was used to describe the association between number of institutions taught at and membership in groups. It was found that 13.64% \((n = 3)\) of faculty who taught at one university were part of three or more groups. A total of 31.58% \((n = 6)\) of faculty who taught at two universities were part of three or more groups. And finally, 58.33% \((n = 14)\) of faculty who taught at three or more universities were part of three or more groups. Overall, the highest frequency for faculty who taught at one institution was membership in two groups. The highest frequency for faculty who taught at two institutions was one and three or more memberships, and the highest frequency for faculty who taught at three or more institutions was three or more memberships. Although there was a positive association between teaching at multiple institutions and group membership, Kendall’s tau-c statistics showed that the association was low, \(r_c = .178\). Table 4-1 shows the frequencies.

In regards to participation in groups, there seemed to be little difference among faculty. Despite the number of institutions taught at the highest frequency for participation in groups was three or more groups. The lowest frequency for faculty teaching at one or two institutions was zero. The lowest frequency for faculty teaching at three or more institutions was one. Kendall’s tau-c statistics showed that the association between teaching at multiple institutions and participation in activities was negative and negligible, \(r_c = -.021\). Table 4-2 present the frequencies.
When asked about the amount of close friends they had, faculty who taught at three or more institutions had the highest frequency of respondents who said they had five or more close friends. A total of 62.5% \( (n = 15) \) of faculty who taught at three or more institutions had five or more close friends. A total of 42.1% \( (n = 8) \) of faculty teaching at two institutions and 40.9% \( (n = 9) \) of faculty teaching at one institution had five or more close friends. Although there was a positive association between teaching at multiple institutions and group membership, Kendall’s tau-c statistics show that teaching at multiple institutions and group membership had a low association, \( r_c = .127 \). Table 4-3 shows the frequencies.

**Bridging Social Capital**

Table 4-4 shows that there was a positive and moderate association between number of institutions taught at and being part of heterogeneous groups as it pertains to religion, \( \chi^2 = 10.017, \Phi_{Cramer} = .393 \). As for gender, there was a positive and weak association between number of institutions taught at and being part of heterogeneous groups, \( \chi^2 = 1.346, \Phi_{Cramer} = .144 \). There was a positive and moderate association between number of institutions and being part of heterogeneous groups as it pertains to race, \( \chi^2 = 5.614, \Phi_{Cramer} = .294 \). As for occupation, there was a positive and weak association between number of institutions taught at and being part of heterogeneous groups, \( \chi^2 = 0.149, \Phi_{Cramer} = .048 \). Finally, there was a positive and moderate association between number of institutions and being part of heterogeneous groups as it pertains to education, \( \chi^2 = 5.562, \Phi_{Cramer} = .293 \).

Result show that faculty who taught at two and three or more institutions made a higher number of phone calls made per week. The frequencies for these two groups were highest in the 31 or more phone calls per week category. On the other hand, faculty who taught at one institution had a higher number of phone calls made in the lowest category of 10 or less phone...
calls. Similar results were found for phone calls received. Most faculty who taught at two or three or more institutions received 31 or more phone calls per week. Most faculty who taught at one institution made 10 or less phone calls per week. Overall, working at various institutions was associated with making and receiving more phone calls per week. Kendall’s tau-c statistics showed that the association was positive and moderate for calls made and number institutions taught at, $r_{\tau} = .302$, and positive and moderate for calls received and number institutions taught at, $r_{\tau} = .329$. Tables 4-5 and 4-6 show the frequencies for calls made and calls received.

**Linking Social Capital**

Despite the number of institutions taught at, trust in the national government was overwhelmingly low for all faculty. No faculty member stated that they trust the national government to a very great or great extent. In fact, 81.82% ($n = 18$) of faculty teaching at one institution, 57.89% ($n = 11$) teaching at two institutions, and 91.67% ($n = 22$) teaching at three or more institutions had small or very small trust in the government. Kendall’s tau-c statistics show that the association was positive but negligible for trusting the national government, $r_{\tau} = .052$. Tables 4-7 shows frequencies for this data.

The lack of trust faculty had towards the national government was similar to the lack of trust that faculty had in the local government. A total of 77.27% ($n = 17$) of faculty who taught at one institution, 73.68% ($n = 14$) teaching at two institutions, and 66.67% ($n = 16$) who taught at three or more institutions trusted the local government to a small or very small extent. Kendall’s tau-c statistics show that the association was negative, but low for trusting the local government, $r_{\tau} = -.127$. Tables 4-8 shows frequencies for this data.
Qualitative Responses

In regards to teaching at multiple institutions, faculty members gave one of five reasons: (a) filling the need for qualified educators, (b) love for his or her subject area, (c) love for the students, (d) need for more financial income, or (e) love for Haiti. The two most common reason for teaching at multiple institutions was a love for the subject and filling the need for qualified educators.

The most common reason for teaching at multiple institutions was that faculty members felt as if they needed to fill in the need for qualified educators. E3 stated, “There lacks good teachers in entomology so, I must teach at various schools.” This is echoed by E5 who wrote, “There lacks qualified individuals in human resources, so I must travel and teach.” N4 stated, “I travel in order for me to share with the student’s quality information that will help them and our agriculture sector.” U4 also wrote, “I want to improve the quality of teaching at multiple institutions for the students.” And finally, N6 wrote, “I teach at multiple institutions to share knowledge with the youth. There is a lack of knowledgeable professors, so I travel to share that knowledge.”

The next most common reason for teaching at multiple institutions was a love for the subject area. Examples of having a love for the subject include F13 who said, “My love for teaching agronomy compels me to teach at as many institutions as I can.” And F21, who said, “There is no special reason for me teaching at multiple schools, I just really love my subject.” Finally, F22 noted, “There are multiple positive and negative effects of teaching at a lot of institutions. I do it regardless because I want to be sure to share my passion with the students.”

It is also important to note that although much of the response was positive, some faculty noted that they taught at multiple institutions because of a financial need. F14 stated, “There is a lack of care and consideration for faculty at my primary institution. I am obligated to teach at
multiple institutions in order to make ends meet financially.” E2 also wrote, “I lack in salary. I need the support so I teach at multiple institutions.” This was supported by C2, who wrote, “I take whatever job they offer me. I need the funds, and so I teach at multiple institutions.” E4 also stated, “I suffer much by traveling around, but I must do it to get a salary.”

When asked about the impact of working at multiple institutions on their social capital, every faculty member mentioned that he or she is able to meet new students and colleagues. F11 mentioned, “I get to broaden my horizons and meet new people, mainly colleagues and students, when I teach at various universities. It’s really good for me.” C5 also said, “It puts me in contact with groups that are very different from me.” This was echoed by U2 who wrote, “I get in touch with a large amount of young people that can make an impact on the world.”

Although faculty commented on the benefit of meeting new people as they work at multiple institution, some faculty believed that meeting new people did not translate directly into social capital. F22 mentioned, “I meet many new people, but I don’t engage with most of them. I don’t have the pleasure of getting to know the many people I meet.” Another informant mentioned, “There is no impact on my social networks, I see many people but it does not benefit me in any way” (F14). Another informant stated, “Teaching at four institutions does not impact my social networks, my contracting work does that. If I lecture at FAMV [UEH], I meet new people but I wouldn’t necessarily network at the school since I have obligations at many other institutions” (N6). Finally, one informant stated, “Sometimes less is more. If I worked at less institutions, I would have more time to invest in and benefit from encountering people” (E4).

**Conclusions, Recommendations, and Implications**

**Bonding, Bridging and Linking Social Capital**

The first objective was to describe the association between bonding, bridging, and linking social capital and the number of institutions faculty works at. In regards to bonding social
capital, overall, there was a positive association between number of institutions taught at and levels of bonding social capital. This association, however, was low and negligible. This data suggests that although some faculty were exposed to more students, faculty, and communities through their multiple teaching duties, they had not been reaping the full benefits of having many opportunities increased bonding social capital.

Bonding social capital can provide significant benefits to faculty members, which would ultimately benefit students (Aldridge et al. 2002; Ferren et al., 2001; Putnam, 1995; Woolcock & Narayan, 2000). Although there is a positive association between teaching at multiple institutions and bonding social capital, faculty and higher education institutions are not maximizing on the opportunity to increase faculty resources through increased bonding social capital. (Aldridge et al. 2002). If faculty have opportunities to engage with more students, colleagues, and communities by teaching at multiple institutions, there is a natural avenue for faculty to have increased bonding social capital. This opportunity has not been maximized on, which presents a dilemma for Haitian faculty members.

A severe lack of resources is one of the greatest challenges to the higher education system. The fungibility of social capital, or ability to change into other forms of capital, can be a used as a tool that mitigates the severe lack of resources within higher education (Portes, 2008). For example, social capital can transform into financial capital when a faculty uses his or her networks to locate and borrow a $300 textbook that is needed for curriculum and content design of his or her course (Portes, 2008). Because Haiti lacks financial capital, it is even more important for Haitian faculty to maximize on social capital.

In regards to bridging social capital, there was a moderate association between number of institutions taught at and being part of heterogeneous groups as it pertains to religion, race, and
education. There was a weak association between the number of institutions taught at and being part of heterogeneous groups as it pertains to gender and occupation. Also, making and receiving more phone calls were both moderately associated with teaching at more institutions. Overall, this means that faculty who taught at more than one institution benefited from higher levels of bridging social capital. This bonding social capital can provide tangible benefits for Haitian faculty (Aldridge et al. 2002; Ferren et al., 2001; Putnam, 1995; Woolcock & Narayan, 2000).

The data for bridging social capital ought to be understood in light of faculty’s need to teach at multiple institutions, which at times is caused because of a lack of financial capital (Dumay, 2015). Because faculty’s livelihood often depends on their ability to connect with heterogeneous groups, there is a need for faculty to have higher bridging social capital the more institutions they work at. Networking with heterogeneous groups can be greatly beneficial for faculty when the fungibility of bridging social capital is used (Portes, 2008).

Finally, linking social capital was measured through trust in the local and national government. As aforementioned, there was a positive but negligible association between number of institutions taught at and trust in the national government, and there was a negative but low association between number of institutions taught at and trusting the local government. Although the associations were negligible and low, this means that faculty who taught at more institutions had a slightly higher association with trusting the national government but distrusting the local government. Frequencies showed that despite the number of institutions faculty taught at, there was a culture of distrust towards the government. This distrust is the summation of a long history of political and social instability within the country (Arias et al., 2013). These findings are understood in light of historical turmoil Haitians have faced by those in power, specifically by
the government. Low and negligible associations seem to be because despite how many institutions faculty work at, they have a shared distrust towards those in power.

The distrust that faculty have towards the government poses a problem for higher education institutions in Haiti. Although five of the six leading institutions are private institutions, the government still oversees all higher education policy and activities throughout the country. Furthermore, agricultural students often end up working for the Haitian Ministry of Agriculture, Natural Resources and Rural Development (MARNDR). Despite faculty’s distrust towards the government there is a necessary connection between higher education and government in Haiti. A lack of linking social capital between faculty and government would mean that faculty would be less likely to be included in dialogue that directly impacts them and their students. Furthermore, agricultural students would not benefit from social networks faculty could have with the government.

Because of the importance of social capital, it would behoove institutions to invest in initiatives that would increase social capital among their faculty. How can this be done? First, it is essential that all institutions invest in increasing the effectiveness of staff meetings so that staff meetings include both part-time and full-faculty. Institutions should also consider encouraging a culture of togetherness that doesn’t demand much time from faculty members.

Including both part-time and full-time faculty in staff meetings would be beneficial because it would provide an avenue for faculty to connect with each other. Although it may be difficult for every agricultural institution to have every faculty present, institutions should make it a priority to have at least one staff meeting a semester mandatory for full-time and part-time faculty to be present. If time is a barrier for faculty, perhaps these three mandatory staff
meetings a year could be hosted during unconventional times such as on weekends or weeknights. Institutions could perhaps offer dinner for faculty as a small incentive.

To increase social capital agricultural institutions should encourage a culture of togetherness outside of staff meetings by creating platform for connections. These platforms for connections do not have to consume much time. The platforms could be ones that faculty already use. For example, institutions could start a faculty Facebook Page that would help to connect faculty to each other even when they have limited time. Faculty and institutions could use the Facebook page as an avenue to connect with other faculty as well as post teaching positions that may be available. If Facebook is less popular, institutions could also decide to use WhatsApp, a popular messaging application in Haiti. This application has a group chat feature, which would serve the needs of the agricultural institutions.

**Faculty’s Perception of Social Capital**

The second objective was to explore faculty perception of why they teach at multiple institutions and how the number of institutions they work at impacts their social capital. The qualitative portion of this research showed that overall, faculty taught at multiple institutions for different reasons and most of the reasons were positive. Dumay (2015) stated that faculty teach at multiple institutions because of a desire to enjoy a decent standard of living, but this research showed that faculty taught at multiple institutions because of a sense of responsibility, patriotism and love for students and the subject area. The discrepancy between Dumay’s (2015) research and this present research is perhaps due to the fact that in depth research on Haitian higher education faculty has not been conducted and parts of their stories have not been captured. In fact, according to Dumay (2015), “the most recent reliable statistic on the entire system dates from 1987” (p. 2). The present research provides a deeper understanding into the reasons why faculty teach at multiple institutions.
As aforementioned, faculty feel a responsibility, patriotism, and love, which all compel faculty to be optimistic about the need to teach at multiple institutions. Although faculty are eager to continue supporting agricultural development through teaching at various institutions, many are only reaping basic benefits to their social capital through their multiple teaching appointments. Institutions and faculty both are not tapping into the full benefits of being able to be exposed to various colleagues, students and communities. In fact, faculty mentioned that their social capital is not increasing because of how many schools they teach at, but rather, because of their other activities such as contracting work.

As aforementioned, many faculty believed that his or her social capital was more impacted by contracting work than by his or her need to teach at multiple institutions. From this information it can be implied that contracting work more naturally provides networking opportunities for faculty to increase their social capital. This may be because through contracting work faculty do not feel the pressures of the higher education environment. The perceived increase in social capital through contracting may also be because through contracting work faculty are given more opportunities to explore further contacting opportunities because of more funding. All in all, there is a great advantage to faculty when it comes to contracting work.

Despite the perceptions of contracting work, agricultural institutions should aim to invest in ways that increase the social capital of their faculty who teach at multiple institutions. Institutions should take advantage of the opportunity to capitalize on Haiti’s distinct situation and use the situation to help improve the quality of higher education. By prioritizing activities such as faculty meetings and the creation of a faculty Facebook page, institutions and faculty could both benefit from the current need to teach at multiple institutions. Having formal networks will create space for intentional networking while creating meaningful social ties.
Overall Conclusions and Implications

Overall, this research showed that teaching at multiple institutions was not associated with higher levels of social capital. Faculty noted that their very limited time and demanding job responsibilities contributed to the fact that being exposed to more students, faculty and communities did not lead to an increase in their social capital. Conversely, faculty believed that their contracting work positively impacted their level of social capital. Two conclusions can be drawn from this data.

The first conclusion is that Haitian agricultural faculty are not engaging with their students and colleagues as much as they could be. Due to limited time and demanding responsibilities, faculty do not feel they are able to invest into building meaningful relationships with students and colleagues. Social capital is only possible through relationship building, which seems to be lacking between faculty and students. This may mean that students are not being engaged and invested as much as possible. This poses a great dilemma for agricultural higher education in Haiti, because agricultural students are the future leaders of Haiti’s agricultural sector. If students are not invested in and engaged throughout their studies, the Haitian agricultural sector is at great risk to being highly ineffective.

A second conclusion that could be drawn is that contracting work provides an environment conducive to increasing social capital in a way that teaching at multiple institutions does not. Faculty believed contracting work provided an environment that allowed for them to invest in relationships that lead to social capital. Perhaps the nature of contracting work, mainly having more resources available and being able to see an end product, encourages faculty to invest in building relationships in that environment. Nevertheless, because social capital can improve the quality of education for agricultural students, it is important to investigate ways that
higher education institutions could cultivate an environment conducive to increasing faculty’s social capital.

**Future Research**

It is recommended that future research be conducted on the social capital of faculty in Haiti. Specifically, this research laid the foundation for research to be conducted on the association between engaging in contracting work and levels of social capital. If faculty do not believe teaching at multiple institutions increases their social capital, it is important to understand what avenues could provide social capital for Haitian faculty.

Future research should also be conducted on the impact of social capital on faculty’s success in their career. Specifically, research should be conducted on the fungibility of social capital among
### Table 4-1. Bonding Social Capital- Membership in Groups

<table>
<thead>
<tr>
<th>Number of Groups</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3+</td>
<td>8</td>
</tr>
</tbody>
</table>

**Schools Taught**

1 Institution: 2, 4, 13, 3, 22
2 Institutions: 2, 6, 5, 6, 19
3+ Institutions: 4, 3, 3, 14, 24

*Note. r = .178*

### Table 4-2. Bonding Social Capital- Participation in Activities

<table>
<thead>
<tr>
<th>Participation Frequencies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

**Schools Taught**

1 Institution: 2, 7, 4, 9
2 Institutions: 2, 5, 4, 8
3+ Institutions: 5, 3, 7, 9

*Note. r = -.021*

### Table 4-3. Bonding Social Capital- Amount of Close Friends

<table>
<thead>
<tr>
<th>Close Friends Frequencies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>22</td>
</tr>
<tr>
<td>3-4</td>
<td>19</td>
</tr>
<tr>
<td>5-6</td>
<td>24</td>
</tr>
</tbody>
</table>

**Schools Taught**

1 Institution: 3, 10, 7, 2
2 Institutions: 6, 5, 6, 2
3+ Institutions: 4, 5, 10, 5

*Note. r = .127*
<table>
<thead>
<tr>
<th></th>
<th>1 Institution</th>
<th>2 Institutions</th>
<th>3+ Institution</th>
<th>Chi Squared</th>
<th>Cramer's V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Gender</td>
<td>18</td>
<td>4</td>
<td>14</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Race</td>
<td>7</td>
<td>15</td>
<td>9</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Occupation</td>
<td>15</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Education</td>
<td>14</td>
<td>8</td>
<td>13</td>
<td>6</td>
<td>22</td>
</tr>
</tbody>
</table>

*Note.* Religion $\Phi_{\text{Cramer}} = .393$; Gender $\Phi_{\text{Cramer}} = .144$; Race $\Phi_{\text{Cramer}} = .294$; Occupation $\Phi_{\text{Cramer}} = .048$; Education $\Phi_{\text{Cramer}} = .293$.
Table 4-5. Bridging Social Capital - Phone Calls Made Per Week

<table>
<thead>
<tr>
<th>Schools Taught</th>
<th>&lt;11</th>
<th>11-20</th>
<th>21-30</th>
<th>31+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Institution</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>2 Institutions</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>3+ Institutions</td>
<td>0</td>
<td>9</td>
<td>3</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>

Note. $r_t = .302$

Table 4-6. Bridging Social Capital - Phone Calls Received Per Week

<table>
<thead>
<tr>
<th>Schools Taught</th>
<th>&lt;11</th>
<th>11-20</th>
<th>21-30</th>
<th>31+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Institution</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>2 Institutions</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>3+ Institutions</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>17</td>
<td>24</td>
</tr>
</tbody>
</table>

Note. $r_t = .329$
Table 4-7. Linking Social Capital- Trust National Government

<table>
<thead>
<tr>
<th>Schools Taught</th>
<th>Very Small</th>
<th>Small</th>
<th>Neither</th>
<th>Great</th>
<th>Very Great</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Institution</td>
<td>14</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>2 Institutions</td>
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<td>9</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>3+ Institutions</td>
<td>15</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>24</td>
</tr>
</tbody>
</table>

*Note. r_s = .052*
Table 4-8. Linking Social Capital- Trust Local Government

<table>
<thead>
<tr>
<th>Schools Taught</th>
<th>Very Small</th>
<th>Small</th>
<th>Neither</th>
<th>Great</th>
<th>Very Great</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Institution</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>2 Institutions</td>
<td>2</td>
<td>12</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>3+ Institutions</td>
<td>11</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
</tbody>
</table>

Note. $r_1 = -.127$
CHAPTER 5
CAREER DEVELOPMENT INFLUENCES OF EMPLOYEES WORKING IN HAITI’S AGRICULTURAL EXTENSION AND ADVISORY SERVICES

Introduction

Agricultural Extension and Advisory Services (EAS) provide vital services to individuals in the developing world (Swanson & Rajalahti, 2010). As one half of the world’s hungry and poor are small-scale farmers, EAS help to provide information, training, linkages to markets, and price discovery skills that help farmers create a mechanism for combating poverty (Global Forum for Rural Advisory Services [GFRAS], 2010). Through these services, farmers are able to find the education and training needed to help improve his or her capacity to increase crop yields and secure a viable future (Jiggins, Samanta, & Olawoye, 1996). According to Anderson and Feder (2004), “extension services have the potential to improve agricultural productivity and increase farmers’ incomes, especially in developing economies where more than 90% of the world’s nearly one million extension personnel are located” (p. 41). EAS play a fundamental role in agricultural development around the globe and as such, the importance of these services could not be emphasized enough (Davis, 2008).

EAS are especially important in Haiti, a country known as the economically poorest in the western hemisphere and one of the poorest in the world (Arias, Leguia, & Sy, 2013). In 2015, Haiti’s per capita income was only one-tenth the Latin American average, which put its poverty on the level of that which is found in Africa (World Bank, 2015). This striking level of poverty is directly related to the high levels of food insecurity found within the country (Food and Agriculture Organization [FAO], 2014). With over 50% of the country’s population undernourished, the level of food insecurity in Haiti was one of the highest in the world in 2015 (FAO, 2015). As a result, both the Haitian government and international organizations identified the agricultural sector as an area of focus for the future development of the nation. In fact, the
Haitian government prioritized re-launching agricultural production in the country (Arias et al., 2013). This prioritization placed a higher emphasis and responsibility on personnel within Haiti’s EAS.

The present study investigated career development influences of employees within Haiti’s EAS. The levels of extreme poverty in Haiti indicate that there is a dire need for quality EAS throughout the country. Services provided by EAS in underdeveloped countries like Haiti have been shown to contribute to the “reduction of hunger and poverty, increase adoption of improved technologies, and increase productive and capacity of clientele “(Swanson, Davis, 2014, p. 2). Because EAS has profound role in agricultural development, it is necessary for extension personnel to experience career development. The quality and development of these extension personnel, after all, determines the overall quality of EAS institutions (Personnel and Organizational Sub-Committee of the Extension Committee on Organizations and Policy [ECOP], 2002; Swanson & Rajalahti, 2010). Minimal research has been conducted on career development influences of extension personnel in Haiti and this research aimed to fill the gap.

Review of Literature and Theoretical Framework

According to Dalton, Thomas, and Price (1997), an individual must be able to change or he or she will stagnate. With a growing and changing world, employees and institutions have an urgent need to either grow or become obsolete (Rennekamp & Nall, 1993). EAS employees, in particular, must experience growth and development in order to address the contemporary challenges that face the agricultural sector (Martin, 1991). Career development is a concept that allows EAS employees to develop within his or her career through life-long learning so that he or she is best equipped to do his or her job (FAO, n.d.; Rennekamp & Nall, 1993).

Career development can be defined as the “act of acquiring information and resources that enables one to plan a program of lifelong learning related to his or her work life” (Malone,
1984, p. 216). It spans one's entire lifetime. Career development allows for an employee to grow in his or her respective field over a period of time, which solidifies who he or she is and how he or she operates at work. In the EAS context, career development can be seen through the technical and managerial skills employees acquire that allow him or her to be successful in his or her agricultural career (FAO, 2016). Career development is a necessary prerequisite for extension personnel who want to experience success in his or her career (FAO, 2016).

ECOP stated, “career development and enhancement for the individual employee are part of the overall (change)…the continuing professional development of faculty and staff will be necessary to meet the demands and expectations of the new workplace” (ECOP, 1992, para 5). There is a consensus among professionals that career development is an essential concept for employees and institutions both (Dalton et al., 1997; FAO, n.d.; Rennekamp & Nall, 1993).

Through career development, employees are able to “engage in lifelong learning in order to maintain professional expertise in relevant areas” (Rennekamp & Nall, 1993, para 1). At the same time, career development of employees provides institutions with a competitive advantage because this concept is linked to high performance (Athey & Orth, 1999). Career development has, therefore, become the subject of investigation for researchers aiming to improve organizational effectiveness (Rennekamp & Nall, 1993).

In an attempt to understand the dynamics of career development, Krumbolz, Michell, and Jones (1976) created a list of four main determinants that contribute to this concept. The determinates of career development included: (a) an employee’s genetics and special abilities such as race and physical disabilities, (b) an employee’s environmental conditions such as political and social forces, (c) an employee’s learning experiences such as observations, and (d) an employee’s task approach skills, such as work habits and performance standards (Krumbolz et
al., 1976). The researchers concluded that career development is the result of constant interactions between the four determinates that were mentioned (Krumbolz et al., 1976).

Many career development models have emerged in an attempt to further understand the dynamics of career development within EAS (Conklin et al., 2002; Coppernoll & Stone, 2005; Flavell 1971; Kohlberg 1969; Rennekamp & Nall, 1993). Most of these career development models can be classified into one of two categories: (a) competency based, and (b) career stages. Competency based models focus on the knowledge, skills, attitudes, and behaviors extension personnel need in order to experience career development (Coppernoll & Stone, 2005; Cooper & Graham, 2001). Conversely, career stage models address the needs, motivators, and organizational strategies EAS institutions should focus on in order to help extension employees progress through the multiple phases of career growth (Kutilek, et al., 2002).

Stone and Bieber (1997) defined competency as the “application of knowledge, technical skills, and personal characteristics that lead to outstanding performance” (p. 1). The researchers suggested that competencies ought to be used to help improve the performance and development of extension personnel. Competency models have been created in order to identify specific core skills and characteristics needed by EAS employees (Rennekamp & Nall, 1994; Stone & Coppernoll, 2004). These models have been used to help leaders within EAS institutions facilitate the professional development of extension employees, which can improve the overall quality of services offered by EAS (Suvedi & Kaplowitz, 2016)

Despite country context, there exists commonality among competency areas that are perceived as important to extension professionals around the globe. Researchers are in agreement that both functional and technical skills are needed in order for extension professionals to be successful in their job (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi
& Kaplowitz, 2016). Some of the most commonly reported functional skills include: (a) critical thinking or problem solving, (b) communication, (c) technology, (d) self-reflection, and (e) program planning, implementation and evaluation (Davis & Sulaiman, 2014; Harder et al., 2010; Scheer et al., 2006; Suvedi & Kaplowitz, 2016).

The second common category for career development models is career stages. Dalton, Thompson, and Price (1997) provided the original framework for understanding career development through their Four Stage of Professional Career Model. The researchers created this four-part model of career development because of the concerns they had with the career models of their day, specifically the pyramid model. Dalton et al. (1997) argued that the commonly used pyramid model did not consider important realities. Dalton et al. (1997) claimed, Organizations found that the pyramidal model failed to take important realities into account. Too often, they found themselves promoting a key technical specialist to a management position because it was the only way to reward him. More and more firms began to set up special new pay and promotion schemes such as the dual ladder for their professional employees in order to recognize the critical contributions they could make as individuals. (p. 21)

As a result, the researchers developed the following four successive career stages: (a) apprentice, (b) colleague, (c) mentor, and (d) sponsor. All four stages involve different tasks, types of relationships and psychological adjustments.

The Four Stage of Professional Career Model was later adapted by Rennekamp and Nall (1994) and then Kutilek, Gunderson, and Conklin (2002). Kutilek et al. (2002) consolidated the four stages into three. The stages in Kutilek et al. (2002) final model of career development are entry, colleague, and counselor and advisor. The entry stage is characterized as the first stage of employment (Kutilek et al., 2002). Employees in this stage are new to the organization and are trying to understand the culture, structure of the organization. In the entry stage employees are in
a state of dependence as they try to understand the skills essential to perform the job (Kutilek et al., 2002).

After the entry stage, employees transition into the colleague stage. During the colleague stage employees grow in independence, autonomy, and professional knowledge (Kutilek et al., 2002). This is the stage where employees focus on refining at least one area of expertise. Employees in this stage often seek out opportunities for further development so that he or she is able to continue assuming special tasks (Kutilek et al., 2002). Employees may remain in the colleague stage for many years, depending on the organization.

The final stage employees transition into is the counselor and advisor stage. During this final stage, employees assume responsibility for other employees within the organization (Kutilek et al., 2002). According to Kutilek et al. (2002), characteristics of this stage includes "movement from independent contributions to a focus on interdependence and the ability to work through others (p. 6). Greater responsibility is given to employees in this stage because they are the individuals who are tasked with the decision making and problem solving of the organization (Kutilek et al., 2002).

Change and challenges are inevitable components of working within EAS (Rennekamp & Nall, 1993). As such, career development can offer a practical approach for extension personnel to adapt and develop as a professional (Burke, 2002). Both career development models, the competency based and career stages, offer a framework for employees to experience career development. Despite which model is used, it is important to investigate the influences that impact extension personnel’s career development journey. Understanding these influences may help professionals create strategies that use positive influences to facilitate career development.
Research has been conducted on the positive and negative influences that impact career development of extension personnel. Herzberg, Mausner, and Snyderman (1959) investigated the foundations of job motivation in the workplace. Herzberg et al. (1959) proposed the Motivation-Hygiene Theory, which states that employees are influenced by two independent dimensions: (a) workplace factors that cause job satisfaction, and (b) workplace factors that prevent job dissatisfaction. The researchers proposed that these two dimensions are not opposites, but instead entirely different components. Motivators such as achievement, recognition, work itself, responsibility, and personal growth produce job satisfaction. Hygienes such as policy and administration, supervision, working conditions, and pay prevent job dissatisfaction. Herzberg et al. (1959) concluded that employees are more encouraged by motivators than they are by hygienes. The present research used the Motivation-Hygiene Theory as a framework to classify positive and negative influences on extension personnel’s career development.

Also using the Motivation-Hygiene Theory as a framework, Strong and Harder (2009) investigated factors that influence extension personnel’s decision to remain in his or her career. The researchers found that salary, job stress, heavy work-loads, balancing work and family, other financial opportunities, and job dissatisfaction were factors that negatively impacted extension personnel retention (Strong & Harder, 2009). On the other hand, mentoring programs, training, staff development, accolades, and having support in the work place were motivators that positively influenced extension personnel retention (Strong & Harder, 2009). The researchers concluded that Extension should use the positive and negative factors found in the study as a guide for creating strategies to decrease extension personnel’s stress levels and job dissatisfaction over time (Strong & Harder, 2009).
Arnold and Place (2011) explored the influences that shape Florida extension agent’s employment decisions at different career stages. The researchers found that positive influences at the across all levels of the career development stages included: (a) personal traits, skills, and knowledge, (b) motivators, (c) support systems, (d) career growth opportunities, (e) collaboration, and (f) career management strategies. Negative influences across all stage levels included: (a) lack of direction, (b) job pressures, (c) personal work management issues, (d) mandated work requirements, (e) work issues, (f) salary disparity, (g) performance measures, (h) career overload, and (i) job dissatisfies. Arnold and Place (2011) suggested that further research should be conducted on the positive and negative influences career influences on extension personnel in other U.S. states and internationally.

Rennekamp and Nall (1993) also conducted research on factors that can positively influence career development for U.S. extension personnel. According to the researchers, employees at the entry stage benefit from: (a) peer mentoring programs, (b) professional support teams, (c) leadership coaching, and (d) job training. Employees at the colleague stage benefit from: (a) in-service education, (b) formal education training, and (c) service on committees or special assignments. Finally, employees at the counselor and advisor stage benefit from: (a) life and career renewal retreats, (b) mentoring and trainer agent roles, (c) assessment center for leadership, and (d) organizational sounding boards. The researchers concluded that these EAS should use the positive influences as organizational strategies to develop their employees.

Taking a more international approach, Singh (2015) claimed that training and development opportunities contribute directly to the career development of extension personnel around the globe. Whether the institution is privately or publicly run, EAS institutions should offer trainings that “start with the identification of training needs through job analysis,
performance appraisal, and organizational analysis” (Singh, 2015, para. 18). The researcher concluded that extension agents need to be trained in (a) technological aspects, (b) human relations, (c) problem solving, (d) sensitivity towards disadvantaged groups, and (e) management in order to see have a positive influence on the career development of extension personnel (Singh, 2015).

Halim and Ali (2015) further confirmed that training can positively influence extension personnel’s career development despite country context. The researchers stated that “deficiencies in knowledge, skills, and ability among extension personnel, particularly those of Asia, Africa, and Latin America, are remarkable” (Halim & Ali, 2015, para. 6). The researchers also pointed out that 39% of extension personnel around the world have only a secondary level education. Furthermore, 33% of extension personnel around the world have only an intermediate level of education. Halim and Ali (2015) concluded that in-service training could have a positive impact on extension personnel which could leave EAS institutions with “longer tenured and most satisfied employees” (para. 6).

Instead of indicating specific areas for training, Halim and Ali (2015) claimed that EAS need to go through a planning phase that identifies the training needs of extension employees. There needs to be an analysis on the organization, individuals, groups, curriculum, and jobs (Halim & Ali, 2015). According to Halim and Ali (2015), EAS will be well informed and ready to select training methods after data is collected.

Despite the cultural context, in-service training has been identified as a major positive influence on career development among extension personnel around the world (Arnold & Place, 2011; Burke, 2002; Halim & Ali, 2015; Kutilek et al., 2002; Singh, 2015). According to Kantè, Moore, Akeredolu, Edwards, Frempong, and Moriba (2016), all types of EAS institutions around
the globe should invest in trainings that upgrade the knowledge, skills and abilities of extension personnel, which will “prepare them to assume greater responsibilities in higher positions within EAS” (p. 7).

It is important to note that the three main types of EAS institutions around the globe are public, private and civil society organizations such as grassroots organizations and NGOs (Swanson & Rajalahti, 2010). Public extension institutions are often operated by the government. In most developing countries public extension is organized as ministries of agriculture (Swanson & Rajalahti, 2010). Due to inadequate government resources most public institutions cannot independently provide the services that are needed within developing countries (Swanson & Rajalahti, 2010). Private and civil society organizations, therefore, are needed to support agricultural development. Private institutions are often run by corporations and businesses. Most private institutions primarily work towards disseminating product innovations and are not engaged in other extension activities (Swanson & Rajalahti, 2010). Civil society organizations such NGO and grassroots organizations are often donor funded. These organizations often work towards providing education, training, and resources to farmers (Swanson & Rajalahti, 2010).

In order to have an effective pluralistic extension system, where multiple institutions provide agricultural services throughout the country, all three types of extension institutions should work together. Specifically, to be effective all extension organizations should work together to determine the country’s long-term agricultural development goals and then “decide which organizations are best suited to carry out these goals and how these different extension functions can be most effectively organized, implemented and financed on a long-term basis” (Swanson & Rajalahti, 2010, p. 37).
Purpose

The purpose of this research was to explore and describe influences on career development among extension personnel in Haiti. The objectives of the research were as follows:

1. Describe influences that impact career development of extension personnel in a government run extension agency in Haiti.
2. Describe influences that impact career development of extension personnel in a private run extension agency in Haiti.
3. Describe influences that impact career development of extension personnel in a grassroots extension agency in Haiti.
4. Compare and contrast influences that impact career development of extension personnel across government, private, and grassroots extension organizations in Haiti.

Methodology

This study used a qualitative design in order to achieve the research purpose and objectives (Merriam, 1998). According to Merriam (1998) this approach is most appropriate when a researcher aims to “discover and understand a phenomenon, a process, or the perspective and worldviews of the people involved” (p. 11). Specifically, this research used an interpretive case study methodology to describe the influences on career development among Haitian extension personnel. A case study is “an intensive holistic description and analysis of a single entity, phenomenon, or social unit” (Merriam, 1998, p. 34). According to Merriam (1998), a good case study is descriptive, particular and heuristic in nature. An interpretive case study in particular contains rich, thick descriptions of a phenomenon in order to analyze, interpret, or theorize about a phenomenon (Merriam, 1998).

In order to understand the phenomenon of career development influences of Haitian extension personnel, three case studies were conducted, focusing on: (a) public, or governmental, (b) private, and (c) grassroots. For the purposes of this research grassroots organizations can be defined as bottom-up, local development organizations (Uphoff, 1993). Grassroots are distinguished from national or regional organizations by their accessibility to locals. Grassroots
organizations and private institutions have both played an important role in supporting agricultural development in ways the Haitian government has been unable to (Arias et al., 2013). As a result, public, private, and grassroots organizations represent the three major EAS institutions in Haiti (GFRAS, 2010). For this reason, these three types of institutions were the focus of the present study. A semi-structured interview technique was used in order to provide an avenue for the informants to explore their experiences. This fairly open framework allowed for the interview to be focused, but conversational (Merriam, 1998).

To select the specific employees within Haiti’s public, private and grassroots EAS organizations, this study used a broad structure of extension systems that was outlined by Bahal, Swanson, and Earner (1992). Haiti’s agricultural sector does not follow the familiar and established U.S. Extension system structure. Furthermore, Haiti follows a pluralistic extension system, which means many different types of organizations offering extension services to Haitian farmers at the same time (World Bank, n.d.). Therefore, the quality and structure of each EAS organization may not be consistent with others around the country (Arias et al., 2013). Bahal et al. (1992) provided a broad framework that applies to most extension systems around the world, which was appropriate for the present study.

According to Bahal et al., (1992), worldwide, there are more than 600,000 extension workers that fit into one of four categories: (a) administrative staff, (b) subject-matter specialist (SMS), (c) fieldworkers, and (d) multipurpose unidentified people. Although there are regional differences within extension systems around the world, according to Swanson, Earner and Bahal (1990), the breakdown of extension personnel is as follows: 7% are administrative staff, 14% are SMS, and 79% are fieldworkers. The present study, therefore, selected a distribution of extension personnel that had administrative, SMS, and fieldwork positions.
Administrative staff includes individuals who are leading the organization. Directors, managers, and coordinators are often part of the administrative team because they lead employees and are responsible for the overall success of the organization (Simpson, Heinrich, & Malindi, 2012). SMS, on the other hand, are individuals who have expertise in a specific field. These employees help with program planning and use his or her specialized expertise to achieve the goals of the organization (Simpson, Heinrich, & Malindi, 2012). Finally, as their title implies, fieldworkers primarily work on the farm. These employees are tasked with introducing new ideas and practices to farmers in order to help producers improve their farming. The efforts of fieldworkers directly influence the practices of farmers (Halim & Ali, 2015).

The first case was the public extension institution, the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR). MARNDR is the primary institution responsible for agricultural development within the country (GFRAS, 2010). Haiti is divided administratively into 10 departments, and MARNDR is located in Damien, near the capital city of Port-au-Prince, which is in the West Department (Arias et al., 2013). MARNDR shares a campus with the oldest university in Haiti, the University of Haiti, which allows for collaboration between the two institutions (Inter-American Institute for Cooperation on Agriculture [IICA], 1991).

In 1991, MARNDR had 2,347 employees, which represented about 5 percent of the total number of public employees in Haiti (IICA, 1991). MARNDR employees work within MARNDR’s five technical areas: (a) plant production, (b) animal production, (c) natural resources, (d) rural development, and (f) administration (IICA, 1991). Although MARNDR is located in the West Department, Haiti’s other nine departments have regional Ministry of Agriculture offices that serve as branches of MARNDR (Arias et al., 2013). Furthermore,
MARNDR has decentralized structures that support the work of the organization, which includes: (a) Board of Agricultural Development, (b) Municipal Agricultural Office (BAC), and (c) research, education and training centers (GFRAS, 2010).

In regards to the geographic distribution of MARNDR employees, about half of all employees work at the headquarters in Damien (IICA, 1991). Despite geographical location a key issue within MARNDR is a lack of qualified personnel and personnel performance (IICA, 1991). Furthermore, according to IICA (1991), “high level staff has changed frequently and few people view employment in the MARNDR as a permanent career path” (IICA, 1991, p. 49). As a response to this information, the Haitian government prioritized training and skill development of MARNDR employees. Specifically, the Haitian government aimed to “establish career paths, salary scales and in-service training” (IICA, 1991, p. 50).

A total of 7 informants were selected from MARNDR: 3 administrative staff, 2 SMS, and 2 fieldworkers. All individuals interviewed were connected in some degree to the extension work that MARNDR conducts. These key informants were purposively identified by the General Director of MARNDR after the premise of this research was explained (Lincoln & Guba, 1985). After receiving approval and contact information, the lead researcher called each of the 7 informants to schedule an interview appointment that would be conducted at MARNDR headquarters.

The second case was a private institution called Darbouco S.A. The private sector plays a critical role within Haiti’s EAS (GFRAS, 2010). Although they are small and fragmented, private agricultural institutions have helped significantly in the commercialization of inputs, such as fertilizers, seeds, and agricultural tools (GFRAS, 2010). Darbouco S.A. is a Haitian-run corporation located in the Port-au-Prince suburb of Pétion-ville. The organization was
established in October 1948 with the goal of provided quality agricultural products (Darbouco, n.d.). This organization has two branches, both located in Pétion-ville. This organization serves as one of the main importers distributor of agricultural inputs and equipment in Haiti. Along with four other private institutions, Darbouco S.A. is responsible for at least 95% of the fertilizer, pesticide and seed sales in Haiti (Abbot, Kingsbury, Weiss, Matt, Yapetnco, Lennon, Whitlock & Williams, 1995). In addition to fertilizer, pesticide and seed, Darbouco also provides fungicides, herbicides, and water and spraying equipment (Darbouco, n.d.).

The research team planned on interviewing 6 individuals within Darbouco S.A., however only 2 interviews were conducted per the request of the president. In Haiti, private agricultural institutions have a culture of privacy, which made it difficult for the researcher to identify an organization that would allow multiple people to be interviewed. Two other private institutions declined the request for an interview because of this culture of privacy. In total one administrator and one SMS was interviewed at Darbouco, S.A. The president of the organization scheduled a time that both the administrator and the SMS could be interviewed sequentially at Darbouco’s headquarters.

Finally, the third case was a grassroots organization called Mouvman Peyizan Papay (MPP). Farmer based organizations, cooperatives and grassroots organizations such as MPP are the foundation for rural development activities within rural Haiti (GFRAS, 2010). MPP was founded on March 20, 1973 by Chavannes Jean Baptiste (MPP, n.d.). MPP is recognized as the largest peasant movement and grassroots organization in Haiti (Goldman Environmental Foundation, 2016). The organization has 60,000 members which includes 20,000 women and 10,000 youth (Goldman Environmental Foundation, 2016). This organization operates in all 10 of Haiti’s departments but is headquartered in Hinche, a city in Haiti’s Central Plateau.
Department. The Haiti’s Central Plateau Department is home to roughly 13% of the Haitian population and most of these Haitians are rural work in the agricultural sector (MPP, n.d.).

MPP began as a small training program for agricultural leaders, but quickly grew to a large movement offering training programs to small-scale farmers around Haiti. MPP focuses on re-establishing food security and food sovereignty in Haiti through educational initiatives (MPP, n.d.). This organization prides themselves on the fact that “men, youth, and women take an integral part of the Papaye Peasant Movement and are inherent to the movement” (MPP, n.d., para 4). A total of 7 individuals were interviewed at MPP: 2 administrators, 2 SMS, and 3 fieldworkers. The founder of MPP identified each of the informant and scheduled an interviewed date accordingly. The research team planned on conducting 6 informants, but the president felt as if 7 was most appropriate. These interviews were conducted at MPP’s headquarters.

Across all three cases, a total of 16 EAS employees were interviewed for this study. Of the 16 employees interviewed, 6 were administration, 5 were SMS, and 5 were fieldworkers. The research team decided to conclude the data collection portion of the study at 16 participants because informants within the same positions began to give the same responses which meant that data reached saturation of information (Denzin & Lincoln, 2008).

The lead researcher developed an interview question guide that facilitate the discussion with the EAS employees. The interview guide was passed through an expert panel for review. Members of this expert panel included University of Florida faculty, Haitian extension agents, and Haitian extension researchers. The interview guide was then was piloted with 5 Haitians within the agricultural sector in order to ensure that the questions were appropriate (Lincoln & Guba, 1985). The researcher revised the guide based on the feedback from the expert panel and the pilot tests. The revisions helped to make the interview guide robust and effective.
The interview guide consisted of 9 questions with probes. The first question inquired about the tasks that the individual’s job entailed. The following three questions asked about the educational background, past training, and past job experiences of the interviewee. The following question asked about the influences that have impacted his or her pathway to his or her current position. Next, the informant was asked about the successes, relationships and networks, and barriers that have impacted his or her career development. Finally, the informant was asked about his or her hopes and aspirations for his or her career development. The interviews often ended with the informants asking questions about the lead researcher and the use of the research data collected.

Before the interview, each informant was given an explanation of the purpose of the study, the methodological process and how his or her responses would be used. The informant was then asked to sign an informed consent and asked if there were any questions or concerns before the interview began. All informants agreed to the informed consent and were given a copy of the research protocol for his or her own purposes. Before the interview began, the informants were asked if the lead researcher was permitted to record the interview. All interviewees agreed.

Interviews were conducted in the Summer of 2016. The researcher traveled to the cities of Port-au-Prince and Hinche in order to collect the data. Each interview lasted between 25-40 minutes and was conducted at the organization’s facility. The interviews were conducted in one of the national languages of Haiti, in Haitian Creole. Interviews were recorded on a digital audio recorder and notes were taken by the lead researcher to ensure data accuracy.

The rigor of this research was established using Lincoln and Guba’s (1985) concept of trustworthiness, which includes four elements: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). To establish credibility, the lead researcher used
triangulation of the information, and of the investigator. There was regular communication between the lead researcher, research team, and experts in the field. Member check was also used in order to ensure that the data collected accurately depicted the thoughts and reflections of the informants. Three informants were called within two weeks of having an interview in order to thank him or her for his or her time, but also to receive feedback on some of the responses he or she gave. No changes were made because the informants confirmed the accuracy of the data. The lead researcher also used peer debriefing with the research team and experts in the field in order to ensure that the truth-value concern was addressed in the research.

In order to establish transferability, the lead researcher provided thick descriptions of the methodological process and used purposive sampling in selecting the informants. To establish dependability, the lead researcher kept an audit trail that included the raw data, notes, and drafts of findings of this study. The lead researcher also used a code-recode strategy to ensure dependability (Ary, Jacobs, Sorensen, & Walker, 2013). Through this strategy the transcripts were coded, left alone for 10 days, and then recoded. The two sets of data were compared to ensure consistency. This strategy ensures that the results could be repeated with consistency if research was repeated with the same participants in the same in the same condition (Ary, Jacobs, Sorensen, & Walker, 2013). Finally, confirmability was established through the use of a reflexive journal, which included the weekly reasoning behind all methodological decisions made by the lead researcher.

After the 16 interviews were conducted the data was transcribed in Haitian Creole. A thematic analysis was used in order to identify themes within the data (Creswell, 2013). Open coding was used to detect themes throughout the interviews. Each line of the interview was coded based on general categories identified through the interviews (Merriam, 2009). Categories
and subcategories were then constructed based on the codes that were identified. Analytical coding was used to interpret and reflect on the meaning of the categories identified (Merriam, 2009). By the end of the coding process categories formed key themes that captured recurring patterns of the data (Merriam, 2009). After themes were created they were translated from Haitian Creole to English.

To further analyze the data, each interviewee was given a specific code. The 7 informants from the MARNDR were given the codes MA1-MA7. The 7 informants from Mouvman Peyizan Papay were given the codes MP1-MP7. Finally, the two informants from Darbouco S.A. were given the codes D1-D2. Each informant was given a number based on the order they were interviewed. Through this classification, the lead research was able to analyze data based on organization and position.

**Subjectivity Statement**

The lead researcher is Haitian born but has been living in the United States since 1998. The lead researcher has extensive research and development experience in Haiti and currently works for a nonprofit organization that operates in the North Department of the country. The lead researcher’s strong ties to Haiti and deep faith in agricultural education was monitored so as not to interfere with the data collection and analysis. Because the lead researcher was the instrument for this study, it was imperative that biases that may have impacted the research process were recognized and report. Strategies to establish trustworthiness helped to minimize the impact of any unidentified biases (Lincoln & Guba, 1985).

**Results**

Based on the research objectives, the following section provides an overview of the results from this research. Specifically, the positive and negative career development impacts for
administration, SMS, and fieldworkers in public, private, and grassroots organizations are outlined. Overall, the common positive influences on career development across all job types included: (a) educational background, (b) in-service training, (c) intrinsic motivation, and (d) extrinsic motivation. The common negative influences on career development across all job types included: (a) lack of resources and (b) environmental hindrances.

**Case 1: Public Extension**

The first objective was to describe influences that impact career development of extension personnel in a government run extension agency in Haiti. For this objective, 7 individuals from MARNDR were interviewed. Findings from the administration showed that positive influences included: (a) educational background, (b) in-service training, (c) goal setting, (d) intrinsic motivation such as patriotism and setting an example for family members, (e) extrinsic motivation such as promotion and improving expertise, (f) religion, and (g) character traits (MA2, MA4, MA5). The most common positive influences were in-service training, intrinsic motivation, and character traits.

An example of in-service training as a positive influence was MA2, who stated, “I’ve arrived at my current position by the grace of God, but I continue to develop because of the trainings and seminars I attend.” MA4 also stated, “Without trainings, I am nothing.” An example of intrinsic motivation can be seen through the comment of MA4, “My motivation is my country. I will do everything I can to move us forward to the development of agriculture.” Finally, character traits can be seen through the statement of MA5, “I am honest in my work. What is hidden will come out. You must treat people in truth and honest and show you have ethics to get far in this field.”
Negative influences among MARNDR administrators included: (a) lack of resources, such as limited funding, (b) environmental hindrances, such as government instability, and (c) career overload (MA2, MA4, MA5). The most common negative influence was lack of resources, as seen through the statement of MA5, “At times I can’t do my work because we don’t have what we need. I want to advance, but it’s hard when you don’t have the funds that you need. Sometimes I plan a program and it gets canceled because we don’t have the money.” MA2 also stated, “We don’t have the funding we need to do what this job calls for us to do.”

Among the MARNDR SMS, positive influences included: (a) educational background, (b) in-service training, (c) mentorship, (d) intrinsic motivation such as patriotism and clientele satisfaction, (e) social networks and (d) extrinsic motivation such as promotion and improving expertise (MA1, MA7). The most common positive influence was intrinsic motivation. MA1 stated, “People depend on me so I must be excellent in my work.” MA7 also showed intrinsic motivation when saying, “Haiti is my motivation. I want a strong, better Haiti for my children, and my children’s children.”

Negative influences to SMS career development included: (a) lack of resources such as limited funding (b) interpersonal issues with co-workers and (c) environmental hindrances such as government instability (MA1, MA7). The most common negative influence was lack of resources. MA1 stated, “We need resources to get our job done but the government doesn’t have enough resources to make things happen.” MA7 also stated, “My greatest barrier at this point is funding. My department has good ideas but we don’t have the money to materialize the ideas.”

Positive influences among MARNDR fieldworkers included: (a) in-service training, (b) mentorship, (c) intrinsic motivation such as clientele satisfaction, and (d) extrinsic motivation such as promotions (MA3, MA6). The most common positive influences were in-service training.
and extrinsic motivation. MA6 stated, “If you’re not getting training as an agronomist, you should find another job. I go through trainings every few months to make sure I am effective.” MA3 also stated, “Yeah, I go to seminars and workshops, they help me a lot.” As for extrinsic motivation, MA6 said, “I hope to one day become the General Director of the Ministry, but I start here. I have to work hard to be where I want to be.” (MA6).

Negative influences among MARND fieldworkers included: (a) lack of resources such as funding, and (b) environmental hindrances such as government instability (MA3, MA6). The most common negative influence was lack of resources. MA3 stated, “I don’t have what I need in order to get my job done sometimes. If I had all the money in the world, I would be able to do my work more effectively, but I am working on a limited budget.” MA6 also stated, “The greatest source of our ineffectiveness is a lack of funding.”

**Case 2: Private Extension**

The second objective of this research was to describe the influences that impact career development of extension personnel in a private run extension agency in Haiti. One individual was interviewed at the administrative level, and one individual was interviewed at the SMS level. The positive influences among Darbouco S.A. administration was (a) educational background, (b) mentorship, (c) intrinsic motivation such patriotism and leaving a legacy, and (d) character traits (D1). The most prominent positive influences were intrinsic motivation and character traits. D1 stated, “In 10 years, I am going to be retired. I hope to cross my hands and see this organization flourish because I worked so hard to continue to that.” In regards to character traits, the informant stated, “You will not get anywhere without ethics. You must have integrity in what you do and treat people with respect as you respect yourself. I am where I am because of my ethics and my honesty.”
Negative influences to career development included (a) lack of resources such as funding, (b) interpersonal issues, and (c) environmental hindrances such as government instability and poverty in Haiti. The most prominent negative influence was lack of resources. D1 stated, “I have much planned for this organization, but we need more resources. This has been a barrier for me. I want to do grand things but a lack of resources hinders me.”

Positive influences among the SMS employee in Darbouco included: (a) educational background, (b) in-service training, and (c) goal setting (D2). The most prominent positive influence was in-service training. D2 said, “I get a lot of training. Not many people can do what I do as a client counselor, so Darbouco makes sure that I get a lot of training.” D2 also said, “My career pathway has been most impacted by the knowledge and expertise I have received from trainings.”

Negative influences included: (a) lack of resources such as knowledge, and (b) environmental hindrances such as government instability (D2). The most prominent negative influence was lack of resources. D2 stated, “Sometimes I just don’t know the answer to certain questions my clients ask me. That’s why try to go to a lot of trainings.” D2 also stated, “My company serves many people throughout the country, but we lack the resources to expand our operations.”

**Case 3: Grassroots Extension**

The third objective was to describe influences that impact career development of extension personnel in a grassroots extension agency in Haiti. For this objective, employees from MPP were interviewed. The positive influences on career development among administrative personnel included: (a) intrinsic motivation such as patriotism, clientele satisfaction, and legacy, (b) goal setting, (c) mentorship, and (d) social networks (MP1, MP2). The most common positive influence was intrinsic motivation. MP1 said, “I work hard so that I can finish this work and be
proud of it when I finish. I will retire from this work soon, and I want to make sure I set up this organization well and for success.” MP2 also said, “This isn’t an easy job, but I work hard for my country, the farmers and my family. Keeping these people in my head keeps me motivated.”

Negative influences that impacted career development for administrative were: (a) lack of resources such as funding, (b) environmental hindrances such as government instability and government persecution, and (c) Interpersonal issues (MP1, MP2). The most common negative influence was environmental hindrances. MP1 stated, “You’ve got to understand, the government has a magnificent impact on everything we do. Sometimes they stand as the biggest barrier for my development and the development of my organization.”

Among SMS, positive influences included: (a) educational background, (b) intrinsic motivation such as feeling indebted and patriotism, (c) extrinsic motivation such as promotions, and (d) in-service trainings (MP3, MP5). The most common positive influence was in-service training. MP3 said, “Without training, there is no work. I am who I am professionally because of the training I have received and continue to receive.” Also, MP5 said, “Training has opened my eyes to the techniques and tools that can best help me in my job. I’m thankful that I have traveled all over including Belgium and the United States, to receive the training that I have.”

Negative influences among SMS included: (a) lack of resources such as funding, and (b) career overload. In regards to lack of resource, MP3 said, “I want to help as many people as possible, but money is lacking and we never have all that we need to complete this big work.” MP5 also said, “We do great work, but sometimes I’m not empowered because I don’t have what I need to get the job done.” In regards to career overload, MP3 said, “I’ve got so much I want to do to and it overwhelms me sometimes.” MP5 also said, “So many people depend on me. It’s a heavy weight to carry.”
Positive influences on career development among fieldworkers in MPP included: (a) intrinsic motivation such as praise and feeling indebted, (b) extrinsic motivation such as salary and promotions, (c) in-service trainings, (d) goal setting, and (e) social networks (MP4, MP6, MP7). The most prominent positive influence was extrinsic motivation. MP4 said, “Without work, you don’t eat. I work to eat and so that my family can eat.” MP6 also mentioned extrinsic motivation, “I need to provide for my family and this work helps me provide food and money for my family. I also learn techniques I can use on my farm, which helps us so much.”

Negative influences included: (a) lack of resources such as limited funding (b) environmental hindrances such as government instability, and (c) interpersonal issues. The most prominent issue was lack of resources. MP4 said “Well, one barrier is that we don’t have what we need to get the job done sometimes. We need more resources to get the work done with excellence. This has hindered me from progressing in my career.” MP7 also said, “MPP changes lives but sometimes we don’t have the resources we need to change the most amount of lives.”

**Cross-Case Comparison**

The final objective was to compare and contrast the influences that impact career development of extension personnel across government, private, and grassroots extension organizations in Haiti. The positive influences that were distinct for administrators across all three types of organizations were: (a) character traits, (b) religion, and (c) intrinsic motivation of wanting to leave a legacy. The positive influence that was distinct for SMS was social networks. The positive influences distinct for fieldworkers were: (a) intrinsic motivation of feeling indebted to work hard and receiving praise, and (b) extrinsic motivation of receiving a salary.

Administrators and SMS employees identified their educational background as a positive influence on their career development, whereas fieldworkers did not explicitly identify educational background as a positive influence. All three types of EAS employees identified the
following factors as positive influences: (a) intrinsic motivation of patriotism and clientele satisfaction, (b) in-service trainings, (c) goal setting, and (d) mentorship.

As for negative influences on career development, the negative influence that was distinct for administrators was environmental hindrance of government persecution. SMS had the distinct negative influence of lack of knowledge. Administrators and SMS had the distinct negative influence of career overload. All three types of positions had the negative influence of: (a) lack of resources as seen through limited funding (b) environmental hindrances as seen through government instability, and interpersonal issues. Figure 5-1 illustrates these comparisons.

Conclusions, Recommendations, and Implications

Overall Conclusion

Administrators across all three types of extension organizations identified the following factors as positive influences on career development: (a) educational background, (b) intrinsic motivation, (c) extrinsic motivation, (d) in-service trainings, (e) goal setting, (f) mentorship, (g) social networks, (h) character traits, and (i) religion. Negative influences for administrators across the three extension organizations included: (a) lack of resources, (b) environment, (c) career overload, and (d) interpersonal issues.

Similar to the positive influences of administrators, SMS indicated that (a) educational background, (b) intrinsic motivation, (c) extrinsic motivation, (d) in-service training, (e) social networks, and (f) mentorship all positively impacted their career development. Unlike Administrators, religion and character traits were not mentioned by SMS as positive influences. Negative influences for SMS were: (a) lack of resources, (b) environment (c) career overload, and (d) interpersonal issues. Interpersonal issues was a negative influencer that was not identified by Administrators.
Fieldworkers stated that the positive influences on their career development included: (a) educational background, (b) intrinsic motivation, (c) extrinsic motivation, (d) in-service training, (e) social networks, and (f) mentorship. Negative influences to their career development included: (a) lack of resources, (b) environment (c) career overload, and (d) interpersonal issues. Both positive and negative influences for field workers were similar to those of SMS.

**Extension Personnel in a Government Run Extension Agency**

MARNDR extension personnel most commonly identified in-service training an essential positive influence on career development. The importance of in-service training was seen through many of the statements. Researchers have affirmed that there is a great need for extension personnel to receive in-service training in order to be successful in his or her career (Arnold & Place, 2011; Burke, 2002; Halim & Ali, 2015; Kutilek et al., 2002; Singh, 2015). As the leading agricultural institution in Haiti, it is essential for MARNDR to continue providing in-service training opportunities for all employees at every level and position. Lack of funding within the organization may lead the institution to under prioritizing training, but without continuous training the employees risk growing stagnant (Kutilek et al., 2002).

Educational background was another prominent positive influence that was identified by nearly all MARNDR employees. When probed about this question, respondents said that most MARNDR employees are graduates from the University of Haiti. Although educational background and past experiences give organizations a competitive advantage (Arnold & Place; Halim & Ali, 2015; Singh, 2015), MARNDR is at great risk by not have a diversified workforce (Grogan & Eshelman, 1998). Because most staff members are graduates from the UEH, there leaves little room for other qualified extension agents from around the country to join MARNDR.
According to Grogan and Eshelem (1998), “Retaining staff from diverse backgrounds needs to be as high a priority as recruiting them” (para. 1). In order for MARNDR to best position employees for success, it is recommended that leadership look into ways of diversifying the workforce. Homogeneity in educational background may lead extension employees in MARNDR having the same strengths but also the same weaknesses as their fellow employees. Difficulty will arise when there is a need for diverse thinking (Grogan & Eshelman, 1998). Fortunately, Haiti has six leading agricultural institutions within the country (CACHE, n.d.). MARNDR benefits from being located in the same city as four of the six leading agricultural schools, which means many qualified entry-level extension agents are miles from their headquarters. It is recommended that MARNDR investigate diversifying their employee options.

Another commonly identified positive influence among MARNDR employees was intrinsic motivation such as patriotism and clientele satisfaction. Herzberg et al. (1959) supported the notion of using intrinsic motivators to help increase employee satisfaction. Strong and Harder (2009) also supported the notion of using intrinsic motivation as a means to increase employee satisfaction. MARNDR can benefit from using intrinsic motivation as a cost-efficient way to encouraging employees and positively influencing career development.

Because patriotism was a factor that was identified by nearly all employees, MARNDR leadership should look into strategically using patriotism as a way of eliminating or minimizing negative influences. For example, MARNDR can intentionally cultivate a culture of unity among employees by focusing on the shared duty employees feel towards the country. Using unifying terminology can be a cost effective way of encouraging collaboration and discouraging interpersonal disputes among co-workers, which was an identified negative influence on career development.
Lack of resource was the main negative influence on career development for MARNDR employees. As a branch of the Haitian government, the lack of funding within the MARNDR is directly related to poverty within the country (Arias et al., 2013). Because this lack of resources cannot be easily or quickly solved, it is recommended that MARNDR engage in strategic planning where leaders within the institution evaluate and prioritize the programs that are currently in operation. By crosschecking operating programs with the strategic plan of the institution, MARNDR leaders will be able to identify programs that can be consolidated and removed.

Another strategy for the MARNDR is to take advantage of being part of a pluralistic extension system (World Bank, n.d.). During the interviews, no employee mentioned collaboration with other extension agencies as a positive influence on their career development. By partnering with other extension agencies, MARNDR would have their financial responsibilities lightened. Similar recommendations have been made by The World Bank Study, which advocated for a pluralistic extension system where MARNDR coordinates activities between public, private and NGO providers (World Bank, 2013). Private and NGO agencies may be resistant because of the culture of distrust towards the government and the culture of privacy. Discussion should be had, however, because every institution would benefit from collaboration (World Bank, 2013). Lack of resources was identified by almost every extension personnel in this study, which means that all parties would benefit.

**Extension Personnel in a Private Run Extension Agency**

Darbouco’s administration identified the intrinsic motivation of leaving a legacy and mentorship as two major positive influences on career development. Researchers support the notion of using mentorship programs as a means to support development (Kutilek et al., 2002; Rennekamp & Nall, 1994; Strong & Harder, 2009). Although mentorship was mentioned there
was no indication that Darbouco intentionally invested in a mentorship program with employees. In fact, informal mentorship was the only type of mentorship mentioned.

Because character traits and leaving a legacy were also mentioned, it would be beneficial for Darbouco to invest in an official mentorship program within the institution. This program can ensure that leaders are investing in employees and instilling character traits that are believed to be essential for the job. Furthermore, because there is a strong culture of privacy, an official mentorship program can be the best way for leadership to increase levels of trust within the organization. Perhaps in the future with a mentorship program, Darbouco’s administrative leadership can feel comfortable enough to have researchers interview more employees without supervision.

Lack of resources was mentioned by every Darbouco employee. Despite the culture of privacy, it is recommended that this institution investigate ways of partnering with other extension agencies (World Bank, 2013). Specifically, Darbouco could investigate how to partner with MARNDR in order to expand their extension initiatives in the country. Although private organizations such as Darbouco, have a distrust towards the government, collaboration could not only help the organization increase their impact, but it could also help the organization increase their annual profit (World Bank, 2013). All in all, there is a high return on investment if Darbouco decides to partner with MARNDR.

Extension Personnel in a Grassroots Extension Agency

Intrinsic motivation was identified as a prominent positive influence on career development for MPP employees. Researchers support the notion of using intrinsic motivation to help increase employee satisfaction and retention (Herzberg et al. 1959; Strong & Harder, 2009). MPP in particular, had almost every employee indicate that clientele satisfaction positively influenced their career development. In order to ensure that employees are continuously
receiving feedback on clientele satisfaction, MPP should invest in ensuring that the organization has a robust evaluation system that enables employees to receive direct feedback from clientele.

Creating an evaluation system for clientele would allow employees to see their positive impact, but it would also show the organization areas that are in need of improvements. A second highly mentioned positive influence was goal setting. By identifying areas of improvement through evaluations, leadership would be able to set goals for the entire organization so that the overall effectiveness of individuals and the organization can improve. A robust evaluation system could bring great benefits to MPP. An evaluation systems have a possibility of increasing the overall effectiveness of this grassroots extension agency.

Lack of resources was the only negative influence that was identified by every MPP employee. MPP is also recommended to aim to build partnerships with other extension agencies (World Bank, 2013). Specifically, MPP should investigate ways that the organization could partner with other grassroots or nonprofit agencies around Haiti in order to maximize their extension efforts. MPP should also investigate ways that the organization could partner with MARNDR in order to reach more areas in Haiti. Although there is a culture of distrust, a collaboration between grassroots and public can prove to be beneficial for all parties involved (World Bank, 2013).

Extension Personnel in Haiti

Many factors positively and negatively influence Haiti’s extension personnel’s career development. High levels of poverty suggest that there is a dire need for effective EAS throughout the country (Arias et al., 2013). Overall, in order to strengthen these services in Haiti, EAS institutions should look to find ways to collaborate with each other (World Bank, 2013). Furthermore, it is imperative that leadership within these institutions seek to find ways that they can use intrinsic motivation to increase job satisfaction, especially when there is an inability to
provide extrinsic motivation (Herzberg et al., 1959). Finally, because of the importance of in-service training, EAS should make every effort to provide opportunities for employees to have local, national, and international training opportunities (Halim & Ali, 2015; Singh, 2015).

Implications

Many factors positively and negatively impact the career development of Haiti’s extension personnel across all types of positions. In order for extension agencies to have an effective organization it is important for leaders within these organizations to identify the both positive and negative factors that impact employees career development. Identifying positive and negative influences is important because these factors could ultimately lead to success or failure within employee’s career progression. (Herzberg et al. 1959; Strong & Harder, 2009).

In Haiti’s case, extension agencies could use inexpensive positive influences to help mitigate the effects of the negative influences on career development. For example, intrinsic motivation can be used as a tool to help extension personnel overcome interpersonal issues. Specifically, if an employee has a high sense of patriotism and desires to significantly contribute to his or her country’s development through his or her job, this sense of patriotism could be used to mitigate interpersonal issues with another co-worker who may have the same intrinsic motivation. Organizations could cultivate a common culture of patriotism to unite co-workers. Likewise, mentorship could be a resource that helps employees overcome career overload. Identifying positive and negative influences could have a profound positive impact on the career development of extension workers in Haiti.

Future Research

Further research should be conducted on the degree to which negative influences impact the career progression of extension employees and how employees overcome these influences. Understanding how negative influences impact employees can provide a guideline for extension
organizations who want to create strategies for minimizing these negative influences. For example, although lack of resources was identified by every informant as a negative influence on career development, further research could help extension organizations identify how they can best equip extension employees to be successful in their careers despite this inevitable factor.

Furthermore, research should be conducted on the impact of intrinsic motivation on career development of Haiti’s EAS employees. Because a lack of resources was the greatest negative influence on career development and intrinsic motivation was the greatest positive influence, research should be conducted to see how much impact intrinsic motivation could have. In a system where resources are limited, intrinsic motivation could be a widely unused resource that can help increase employee satisfaction and career development in Haiti.
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<td>• Clientele Satisfaction</td>
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<td>• Co-worker Issues</td>
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Figure 5-1. Positive and Negative Influences of Haitian EAS Employees.
CHAPTER 6
CONCLUSION

Chapter Overview

One of the great benefits of research is that when done right it “provides an important long-run perspective on the issues that we face on a day-to-day basis” (Rolnick, 2004, para 59). Although the present chapter serves as the final part of this research, the conclusions and recommendations presented in this chapter are as essential as the information provided in chapters one through five. This concluding chapter first provides a comprehensive overview of the three parts of this study: (a) faculty perception of students’ extension competency area needs (b) social capital of faculty within Haiti’s AET system, and (c) career development influences of employees working in Haiti’s EAS. Next, an overall conclusion of these three parts combined is provided in order to show the interconnectedness of the different parts of this research. Finally, recommendations for relevant stakeholders and suggestions for further research is presented.

Research Overview

The purpose of this research was to provide a description of the Haitian AET system. Because agriculture is the foundation for securing economic growth and a prosperous future for impoverished countries, having a robust AET system is a necessary prerequisite to seeing development within Haiti (United States Agency for International Development [USAID], 2015). A critical first step to ensuring that Haiti’s AET system is functioning effectively is to investigate and describe the individual parts of the system. This research used a General Systems Theory (GST) framework in order to investigate the Haitian AET system (Bertalanffy, 1968). GST claims that it is impossible to fully understand an entire system without systematically and methodically studying the various actions and interactions of the individual parts (Bertalanffy, 1968). Under the GST framework, the researcher focused the investigation on three key
individuals within Haiti’s AET system: (a) agricultural students, (b) agricultural faculty, and (c) extension personnel. By investigating these individuals on a micro level data from this research provided an overall glimpse of the system as a whole on a macro level.

One of the key issues facing Haiti’s agricultural sector has been an underinvestment in human capital (World Bank, 2005). In light of the lack of investment in human capital, the present research focused on human capital indicators among Haiti’s agricultural students, faculty, and extension personnel. Specifically, this research investigated perceptions of extension students’ competency areas among agricultural students, levels of social capital among agricultural faculty, and career progression among extension personnel. With this focus the research was able to provide a holistic analysis of the Haitian AET system.

**Student’s Extension Competency Area Needs Overview**

Haitian agricultural students are the future leaders within Haiti’s agricultural sector (USAID, 2015). One day, these agricultural students will be responsible for spearheading extension initiatives in Haiti’s leading agricultural institutions such as the Ministry of Agriculture, Natural Resources and Rural Development (MARND). It is therefore, critical that these students receive proper education in necessary extension competency areas during their time at the university. The first part of this research aimed to determine faculty’s perception of what competency areas should be focused on in order to ensure that their students are prepared to be successful extension workers upon graduation.

Results of this study showed that faculty believed that their students graduate successfully mastering the following extension competency areas: (a) agricultural system, (b) program implementation, (c) program planning, (d) program monitoring and evaluation, and (e) communication. Although there was mastery of some competency areas, faculty indicated that not all of the competency areas were successfully mastered by their students. The lowest ranked
competency areas were: (a) gender issues in agriculture, (b) adult learning, (c) behavior change, (d) critical thinking, and (e) youth issues in agriculture.

In regards to the importance, the following competency areas were ranked the highest: (a) professional ethics, (b) agricultural system, (c) agricultural entrepreneurship, (d) communication, (e) program implementation, and (f) leadership. Conversely, the following competency areas were ranked the lowest: (a) adult learning, (b) gender issues in agriculture, (c) behavior change, (d) youth issues in agriculture, and (e) community organizing.

Faculty were also asked if they believed it was his or her institution’s responsibility to teach the GFRAS competency areas. The highest ranking competency areas, as it pertains to responsibility of institutions to teach the competency areas, were: (a) agricultural system, (b) program monitoring and evaluation, (c) agricultural entrepreneurship, (d) communication, and (e) program implementation. The lowest ranking competency areas were: (a) adult learning, (b) behavior change, (c) critical thinking, (d) gender issues in agriculture, and (e) adaption to change.

Davis and Sulaiman (2014) collaborated with a panel of extension experts in order to finalize the list of core competency areas for extension personnel. Although rankings of competency areas may change for each country, in the case of Haiti, there was a clear divergence in opinion in regards to the importance of the competency areas. Haitian faculty did not find all competency areas as important as Davis and Sulaiman (2014). This divergence indicates: (a) Haitian faculty may not have adequate master in the competency areas themselves, and (b) Haiti’s EAS may be at risk to being ineffective if extension students are graduating without necessary competency areas.
**Faculty’s Social Capital Overview**

In addition to agricultural students, faculty play a critical role within the Haitian AET system. Faculty are tasked with the import job of training and educating the future leaders of the Haitian agricultural sector. The capacity of faculty to effectively do their job can directly impact the quality of education students receive (FAO, 2013). The quality of education received by students will ultimately impact the agricultural sector (FAO, 2009, p. 68). It is necessary, therefore to focus on avenues that equip agricultural faculty to be successful in their career.

Social capital, or personal connections, provides an avenue for faculty to be more effective in their job. In its best form, social capital is an important variable within higher education institutions because it contributes to economic, social, and political development by: (a) encouraging the sharing of information, (b) discouraging opportunistic mindsets and behaviors, and (c) facilitating collective decision making (Woolcock & Narayan, 2000). The second part of this research, therefore, focused on levels of social capital among faculty within Haiti’s AET system. The purpose of this section of this part of the research was to identify how teaching at multiple institutions impacts social capital of faculty within the Haitian AET system. A mixed methods approach was used in order to accomplish the study’s objectives (Creswell, 2013).

Results from the quantitative portion of this research showed that the association between teaching at multiple institutions and bonding social capital low and negligible. Similarly, the association between teaching at multiple institutions and linking social capital was low and negligible. In other words, levels of bonding and linking social capital were the same for faculty despite the number of institutions faculty taught at. Results on linking social capital should be understood in light of the Haitian context. Being the economically poorest country in the western hemisphere, a culture of distrust has emerged in many of Haiti’s sectors, including the
agricultural sector (Arias et al., 2013). Despite the number of institutions taught at distrust was evident in faculty’s ability to trust individuals around them. Linking social capital can be impacted by distrust because individuals with authority have historically been the ones who have exploited the Haitian people (Dubois, 2008). This can be seen through actions of the government as well as the international institutions. As a result, faculty may not desire or trust linking social capital with individuals in authority.

Although increasing levels of bonding and linking social capital were not associated with teaching at more institutions, bridging social capital was different. Data showed that the association between bonding social capital and teaching at multiple institutions was positive and moderate. In other words, as the number of institutions faculty taught at increased, there was a higher association with bridging social capital among Haitian faculty. These results were supported by the initial assumption of this research, which was that if faculty teach at more institutions, they have more opportunities to be exposed to more faculty, students, and communities. This exposure could positively impact faculty’s social networks.

The qualitative portion of this research showed that most educators were optimistic about teaching at various institutions. Although many were unable to find a steady salary from just one institutions, faculty saw their circumstance as an opportunity to improve the quality of education for students around the country while sharing their passion. In regards to teaching at multiple institutions, faculty members gave one of five reasons including: (a) filling the need for qualified educators, (b) love for the subject, (c) love for the students, (d) need for more financial income, or (e) love for Haiti.

Faculty also shared perceptions on how teaching at multiple institutions impacted their social capital. Faculty commented on the benefit of meeting new people while working at
multiple institution. Many faculty, however, indicated that teaching at multiple institutions did not translate directly into an increase in their social capital. In fact, teaching at multiple institutions only increased the demands on their time caused by having multiple appointments. Faculty commented that being exposed to various types of people through teaching appointments does not materialize into a great benefit in their lives. Conversely, faculty indicated that consulting jobs significantly impacted their levels of social capital.

**Extension Personnel’s Career Progression Overview**

Agricultural Extension and Advisory Services (EAS) provides vital services to individuals within the developing world (Swanson & Rajalahti, 2010). Extension personnel are at the heart of extension services because they are the ones who provide essential support, training, and skills to farmers in rural areas. The capacity of extension personnel, therefore, is an essential component of having a robust AET system.

The third and final part of this research investigated career development influences of employees within Haiti’s EAS. The purpose of this final part of the research was to explore and describe influences on career development among extension personnel in Haiti. In order to achieve this purpose, the set objectives of the research were: (a) describe influences that impact career development of extension personnel in a government run extension agency in Haiti, (b) describe influences that impact career development of extension personnel in a private run extension agency in Haiti, (c) describe influences that impact career development of extension personnel in a grassroots run extension agency in Haiti, and (d) compare and contrast influences that impact career development of extension personnel across government, private, and grassroots extension organizations in Haiti.

Of the 16 individuals who were interviewed for this research 6 were administrative staff, 5 were SMS, and 5 were fieldworkers. The researcher decided to conclude the research at 16
participants because the data reached saturation of information at each stage of the career development model. Informants began to give the same responses (Denzin & Lincoln, 2008). Data from the across all job types showed that the common positive influences on career development across all job types included: (a) educational background, (b) in-service training, (c) intrinsic motivation, and (d) extrinsic motivation. The common negative influences on career development across all job types included: (a) lack of resources and (b) environmental hindrances. This study showed that both positive and negative influences impact career development of Haitian extension personnel. Extension agencies could use the positive influencers to help mitigate the negative influencers.

**Overall Conclusion**

**Conceptual Model**

As mentioned in the beginning of this chapter, the three parts of the present study came together under a GST framework (Bertalanffy, 1968). In order to understand the whole Haitian AET system, this research provided a systematic investigation of the independent parts of the system. The conceptual model of this study as presented in Figure 6-1, illustrates this system by depicting the Haitian AET as the support system, or the legs, of a larger system, the agricultural sector. Data from the three parts of this study confirmed that this conceptual model accurately depicted the role of and relationship between agricultural students, faculty and extension personnel.

Faculty members saw their role as an irreplaceable one. Although faculty were often required to work intensely in order to teach at multiple institutions, faculty were content doing so. Faculty believed they were significantly contributing to the quality of education in Haiti, which turned their struggles into a sense of responsibility. Furthermore, faculty believed that their additional duties as agricultural contractors and extension agents allowed them to provide
critical support to more than just students but farmers as well. Likewise, extension personnel were motivated to progress in their career by the possibility of impacting lives and leaving a legacy. Whether extension agents were in administrative, SMS, or field working positions, extension personnel were aware that their work significantly contributed to the agricultural advancement of their communities. Although faculty and extension personnel provide more direct support to the agricultural sector, students engage in internships and other educational opportunities that allow them to be a support. Furthermore, students are the future faculty and extension personnel, which makes their support just as crucial as the current faculty and extension personnel.

The interrelatedness of faculty, students, and extension was demonstrated throughout the three parts of this study. As showed in the second part of the study, faculty taught students at multiple institutions, but also engaged in contracting work in the community and extension work with MARNDR. The third part of the study focusing on career development of extension personnel showed that students engaged with faculty but students also engaged with extension personnel by enrolling in internships. Extension agents guest lectured for students and often work alongside of faculty. The wedges, or connecting pieces of the stools legs, in the conceptual model was accurately depicted.

The overall purpose of this study was to describe the Haitian AET system so as to hopefully provide a status report of the system’s current state. The following sections provide a more in-depth description of the Haitian AET system.

**Overall Observation the Haitian AET System**

Through this research, many observations were made about the Haitian AET system. These observations paint a picture of the system as a whole. The observations are expressed below in the form of a SWOT Analysis.
Strengths

1. Levels of patriotism are high within the system. Faculty and extension personnel recognize the critical state that Haiti is in and they desire to contribute to the advancement of their country. Faculty and extension personnel will contribute even if they are inconvenienced. In order to support the development of their country, faculty work at multiple institutions and extension are willing to tolerate barriers within their career development. The patriotism within Haiti’s AET system can be used to unite and motivate individuals even when monetary resources are lacking.

2. Intrinsic motivation commonly fuels work throughout the system. Despite serious challenges faculty, extension personnel, and students continue to play their part in the Haitian AET system. Faculty and extension personnel expressed intrinsic motivation such as love for Haiti, as one of the reasons for continuing their work. Because people are the most valuable resource within the system, it’s important to keep motivation high. Intrinsic motivation is essential because does not use the limited financial resources within the AET system.

Weaknesses

1. There is a severe lack of resources throughout the system. This lack calls for innovativeness and resourcefulness.

2. There is a deep-rooted culture of distrust within the system. Faculty and extension personnel seem to have high levels of distrust towards government agencies, other institutions, and even their countrymen. This lack of trust can make collaboration and unity difficult to achieve.

3. There is a lack of communication within the system. This lack of communication weakens the possible impact that faculty could have on students and extension personnel could have on their constituents. For example, there was divergence in opinion among faculty as it pertains to extension competency area needs of agricultural students.

4. There is a lack of collaboration within the system.
   a) MARNDR has deep roots with the University of Haiti, being that it is the oldest university in the country. Furthermore, the University shares the campus with the Ministry. Other higher education institutions, however do not have the luxury of collaborating with MARNDR employees to the same extent. Students are almost exclusively hired from the University of Haiti to work at MARNDR.
   b) Public, private, and public extension agencies do not frequently collaborate with each other because of a fear of competition and government corruption.
   c) Agriculture faculty interact with extension personnel and students, however, the interactions are not as meaningful as they could be. Teaching at multiple institutions does not impact faculty’s social capital as much as it could.
Gender issues in agriculture is not emphasized as much as it could be even though there are clear indications that there are gender issues within Haiti’s AET system. Although gender issues in agriculture was one of the lowest ranking competency areas in importance, student master, and institutions responsibility to teach, there are a disproportionate amount of women faculty than men. Furthermore, although women farmers do not generally hold titles for land ownership, women make up the majority of the farmer workforce (Bell, 2016).

Students are not leaving their universities fully prepared to become competent and successful extension personnel. Entry level extension employees note that they lack technical training in their specific areas. Also, faculty note that their students graduate being less competent in some areas rather than others.

**Opportunities**

1. The Haitian AET system is very interconnected. Most faculty teach at multiple institutions and many of them also have an extension role. This interconnectedness can be used to build meaningful relationships and share knowledge among these leaders.

2. Institutions have informal connections because many faculty teach at multiple institutions. These relations can be used to offer students rich opportunities to connect with students at other institutions through collaborative efforts such as official joint conferences, workshops and internship opportunities.

3. Four of the six top agricultural universities are located in the capital of Haiti. These institutions are only miles away from each other. This proximity makes collaboration and joint efforts possible.

4. Although little research has been conducted on this system, millions of dollars are poured into strengthening the Haitian agricultural sector every year. These financial resources can be leveraged into increasing the capacity of individuals within the Haitian AET system.

5. Haiti’s government has identified agricultural development as the key to Haiti’s advancement. This acknowledgement can be used to rally the nation behind large agricultural initiatives.

**Threats**

1. There is instability within the government. Government instability has the potential of crushing the entire system. During the time of the research there was no official President of Haiti, which made events in the country unpredictable. This instability could cause competent faculty to walk away from working for the government.

2. Corruption is a prominent theme that emerged throughout interviews. Corruption within the government and throughout institutions may have contributed to the deep sense of distrust within the Haitian AET system. In order to move forward, trust must be built and unity must begin to emerge.
Significance of Study

Understanding and describing the Haitian AET system is an essential first step to ensuring that it is robust and functioning properly. In order to do this, the present research investigated the individual parts of the system. This investigation provided insight into the strengths, weaknesses, opportunities and threats within the Haitian AET system. With this insight, Haitian leaders can be guided into making decisions that can positively impact the system as a whole.

Recommendations

Haitian Universities

The following recommendations can help guide leaders within Haitian universities make decisions that will positively impact their students and faculty members.

1. In order to get a holistic view of competency area needs of extension students, a council should be assembled with the following types of individuals: (a) faculty representatives from the six leading agricultural institutions; (b) extension student representatives from each institution; (c) extension personnel representatives from private, public, and nonprofit institutions; and (d) farmer representatives. This diverse council would be able to most appropriately guide discussions on what competency areas are needed for Haitian extension students to be effective in their future careers.

2. Agricultural universities in Haiti should invest in building official partnerships with U.S. land-grant universities. Partnerships with U.S. land-grant universities would provide Haitian faculty support and possible resources for professional development. On the other hand, partnerships would provide U.S. land-grant universities with international collaboration research opportunities.

3. Faculty should cultivate and nurture intrinsic motivation incorporating intrinsic motivation in courses and perhaps teaching a course on intrinsic motivation. Since intrinsic motivation is an essential piece of faculty and extension personnel’s career, students ought to develop intrinsic motivation before they begin their careers.

4. Faculty should focus on evaluating current curriculum and pedagogy to see if it reflects the competency area needs of agricultural students. Institutions would benefit from having an external review help conduct this evaluation. Partnerships with U.S. based land-grant universities may serve as a resource for Haitian universities in need of an external review.
5. After curriculum and pedagogy are evaluated, faculty should look at ways to reform curriculum and pedagogy.

6. Institutions should create an online database where students are able to see the collective internship, volunteer, workshop, conference, and collaborative opportunities they can obtain during their time at the university. This database would help extension students receive greater opportunities to develop competency areas even if their faculty do not have the needed competency area. Furthermore, it would help students outside of UEH connect with MARNDR internship opportunities if there are some available.

7. Leaders within the institutions should cultivate an atmosphere of unity among faculty by creating platforms for faculty to connect, such as a Facebook page or WhatsApp.

8. MARNDR should look into creating an outreach branch that supports the development of students from all agricultural institutions in Haiti.

9. The leading six institutions should look into ways they could support the development of other agricultural institutions in Haiti. For example, the six institutions could create a larger network for institutions who are not part of CACHE, but would like to be part of a group a similar mission as CACHE.

10. Explore the possibility of merging the four leading agricultural institutions that are located in the capital city of Port-au-Prince, Haiti. Although there may be resistance to this recommendation, it may be beneficial for Haitian institutions to investigate ways that they could merge their limited resources into a mega institutions that benefits from collaboration among faculty in the capital.

**Haitian EAS**

The following recommendations can help guide leaders within Haiti’s extension services make decisions that will positively impact their employees and constituents.

1. EAS should create a mentorship program where entry level employees can be mentored by more experienced employees. Mentorship has been shown to have a positive influence on career development (Kutilek et al., 2002; Rennekamp & Nall, 1994; Strong & Harder, 2009). Although individuals in this study confirmed the role of mentorship there were no official mentorship programs. Mentorship programs could be an inexpensive way to supporting extension personnel’s career development.

2. EAS should offer international and national training opportunities for employees at each level. Training opportunities have significant impacts on career development (Halim & Ali, 2015; Singh, 2015). Although they can be expensive it is important for all EAS organizations to invest in training opportunities.

3. EAS should collaborate with universities to offer internship opportunities for students. Internships provide free labor for the hosting organization, experience for extension
students, and they also help to ensure that future entry level employees are prepared to do the type of work that is required of them in the future.

4. EAS should look into possible collaboration initiatives between private, public and grassroots agencies. All types of extension organizations mentioned that they lacked funding. Collaboration would benefit all organizations involved by furthering the EAS mission while lessening the financial burden for everyone involved (World Bank, n.d.).

**Extension**

The following recommendations can help those engaged in extension work around the globe.

1. Extension organizations should continue researching capacity indicators among AET employees around the globe such as social capital, competency areas, and career development. These capacity indicators can help increase the success and development of individuals within AET systems around the world.

2. Extension organizations should investigate the relationships and collaboration that exists among key players within AET systems. Most developing countries have a pluralistic extension system and in order to have an effective system there must be collaboration among private, public, and nonprofit organizations (Swanson & Rajalahti, 2010). One of the first steps to analyzing the effectiveness of the system is to investigate the independent parts and the relationships among them.

3. Extension organizations in developing countries should look into ways of using intrinsic motivation as a resource that increases job satisfaction, especially when financial resources are limited.

**Future Research**

Although this present research was able to provide great insight that can help improve the agricultural sector in Haiti, there are still areas that ought to be investigated more. The following section provides a brief list of possible areas of future research. In regards to the competency area needs of extension students, further research should be conducted that investigates what competency areas students, extension personnel, and farmers believe are necessary for extension students to be successful upon graduation. Although faculty provided their perspective on what they believe is important for students, there are other vital stakeholders that may provide
different opinions. The same chart that was used in this study to interview faculty could be used to interview the other stakeholders.

In regards to social capital of faculty, further research should be conducted on how contracting work impacts faculty’s social capital. Faculty indicated that teaching at multiple institutions does not increase their social capital but contracting work does. It would be beneficial for institutions to know what avenues they can take to ensure that faculty have increased levels of social capital. Investigating if there is an association between contracting work and increased social capital would be beneficial for institutions, faculty, and students.

Finally, further research should be conducted on the impact of intrinsic motivation on career development of Haiti’s EAS employees. Because lack of resources was the greatest negative influence on career development and intrinsic motivation was the greatest positive influence, research should be conducted to see how much impact intrinsic motivation could have. In a system where resources are limited, intrinsic motivation could be a widely unused resource that can help increase employee satisfaction and career development in Haiti.
Figure 6-1. Haitian Agricultural Sector
APPENDIX A
LETTER OF SUPPORT FROM THE UNIVERSITY OF HAITI

Dear Berthrude,

I encourage you to do the research on Agricultural Education and Training Systems in Haiti as part of your thesis work. I will be pleased to give an oversight for this study during the time it will last.

This study will provide actual and relevant information about the agricultural education systems. Indeed, the objectives are to describe the agricultural education and training systems, the geographical reach and linkages between agricultural capacity building institutions, and to illustrate the pathway key informants have taken to learn the skills and competencies needed for their position in the agricultural sector.

I have read your proposal and see that you are going to do surveys in the country. I would like to take a look to the questionnaires that will be used during these surveys.

Sincerely,

Marie Lesly Fontin
Director of Basic Sciences
College of Agriculture and Veterinary Medicine (FAMV)
State University of Haiti (UEH)
## APPENDIX B
### COMPETENCY INTERVIEW QUESTIONS

<table>
<thead>
<tr>
<th>Agricultural Student’s Competency Areas</th>
<th>Rate how important you think it is for your students to gain competency in this area so that they will be successful in their future employment.</th>
<th>To what degree does your institution teach this competency? You may select more than one.</th>
<th>Is it your institution’s job to help students develop this competency?</th>
<th>To what level do students possess competency in this area when they leave your institution?</th>
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<tr>
<td>Agricultural Entrepreneurship</td>
<td>1 = Not Important 2 = Slightly Important 3 = Moderately Important 4 = Important 5 = Very Important</td>
<td>1 = As a whole course 2 = As a module/unit within a course 3 = As a single lecture within a course 4 = As a workshop/seminar outside of a course 5 = Through an internship or other field experience 6 = We don’t teach it</td>
<td>1 = Yes 2 = No</td>
<td>1 = Not at All 2 = Very Little 3 = Somewhat 4 = To a Great Extent 5 = I don’t know</td>
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<td>Community Organizing</td>
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<td>Critical Thinking</td>
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<td>Gender Issues in Agriculture</td>
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APPENDIX C
SOCIAL CAPITAL INTERVIEW QUESTIONS

Social Capital

Thank you for agreeing to be interviewed for this research. The purpose of this study is to understand the social networks and relationships of Agricultural Faculty in Haiti.

PART A: General Information

1. Name: ____________________________________________

2. Gender: Male/Female

3. Age:   Under 25       26-45       46-55       over 56

4. Highest educational level completed: __________________________

5. Current institution’s name: __________________________________________

6. Position: _________________________________________________________

7. How long have you been in this position? ________

8. How long have you been an educator? _________

9. Besides this institution, do you also teach at another institution? YES or NO
If NO skip to question 11

   a. How many more institutions do you teach at? ________

   b. Which one(s)

   c. How much of your time per month is spent at each institution?

   d. Which is your primary institution?

   e. Which other institutions have you taught at in the past?
f. Which institutions do you plan on teaching at within the upcoming 6 months?

10. Why do you teach at multiple agricultural institutions?

11. How do you think teaching at multiple institutions impacts the networks and relationships you have?

12. Do you have relationships with other educational institutions for purposes other than teaching (i.e. contracting, advising, etc.)? YES or NO

   *If NO skip to Part B*

   a. Which ones?

**PART B: Groups and Networks**

1. How many groups, organizations, networks or associations do you belong to? These could be formally organized groups or just groups of people who get together regularly to do an activity or talk about things.

2. On average in one month, how often do you participate activities of your groups or organizations?

3. How many of these groups or organizations do you pay membership dues for?

4. How many of these groups or organizations do you participate in decision-making for the group or organization?
5. Of all of these groups to which you belong, which one is the most important to you?
   Name of group: __________________________________________

6. Thinking about the members of this group, are most of them the same...

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<tr>
<th></th>
<th>1. Yes</th>
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<tbody>
<tr>
<td>A. Religion</td>
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<tr>
<td>B. Gender</td>
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<tr>
<td>C. Race</td>
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7. Do members mostly have the same...

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<th>1. Yes</th>
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<tbody>
<tr>
<td>A. Occupation</td>
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<tr>
<td>B. Educational background or level</td>
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</tbody>
</table>

8. Does this group work with or interact with groups outside your neighborhood?
   1. No
   2. Yes, occasionally
   3. Yes, frequently

9. About how many close friends do you have these days? These are people you feel at ease with, can talk about private matters, or call on for help.

10. If you suddenly had an emergency and needed support are there people beyond your immediate household and close relatives to whom you could turn, who would be willing and able to help you?
    1. Definitely
    2. Probably
    3. Unsure
    4. Probably not
    5. Definitely not

**Trust and Solidarity**

11. Generally speaking, would you say that most people could be trusted or that you can’t be too careful in dealing with people?
    1. People can be trusted
    2. You can’t be too careful
12. In general do you agree or disagree with the following statements?

| 1. Agree strongly |
| 2. Agree somewhat |
| 3. Neither agree or disagree |
| 4. Disagree somewhat |
| 5. Disagree strongly |

A. Most people in your neighborhood are willing to help if you need it.
B. In your neighborhood, one has to be alert or someone is likely to take advantage of you.
C. Most people in your institution are willing to help if you need it.
D. In your institution, one has to be alert or someone is likely to take advantage of you.

13. How much do you trust...

| 1. To a very great extent |
| 2. To a great extent |
| 3. Neither great nor small extent |
| 4. To a small extent |
| 5. To a very small extent |

A. Local government officials
B. National government officials
C. Individuals within your institution
D. Individuals outside of your institution
E. People within your neighborhood
F. People outside your neighborhood
G. People who belong to the same groups and organizations as you.

14. If a community project does not directly benefit you but has benefits for many others in your neighborhood, would you contribute time or money to the project? Time

1. Will contribute time
2. Will not contribute time

Money

1. Will contribute money
2. Will not contribute money
15. If a project does not directly benefit you but has benefits for many others in your institution, would you contribute time or money to the project?
   Time
   1. Will contribute time
   2. Will not contribute time
   Money
   1. Will contribute money
   2. Will not contribute money

Collective Action and Cooperation
16. In the past 12 months did you participate in any collective activities, in which people came together to do some work for the benefit of a community?
   1. Yes
   2. No (skip to question 18)

17. Generally, how many times do you participate in these types of activities per month? __________

18. If there was a trash problem in your community, how likely is it that the people would come together to try to solve the problem?
   1. Very likely
   2. Somewhat likely
   3. Neither likely or unlikely
   4. Somewhat unlikely
   5. Very unlikely

19. If there was a problem in your department (where you are currently working) how likely is it that the people would come together to try to solve the problem?
   6. Very likely
   7. Somewhat likely
   8. Neither likely or unlikely
   9. Somewhat unlikely
   10. Very unlikely

20. Generally, how many times do you make a phone call per week? ______

21. Generally, how many times do you receive a phone call per week? ______
22. What are your three main sources of information about the government’s activities.

1. Relatives, friends and neighbors
2. Local market
3. Radio
4. Television
5. Groups or associations
6. Business or work associates
7. Community leaders
8. An agent of the government
9. NGOs
10. Internet

23. There are often differences in characteristics between people living in the same neighborhood or working at the same institution. For example, differences in wealth, social status, race, religion, political beliefs, sex or age. To what extent do any such differences characterize your:

a. Neighborhood
   i. To a very great extent
   ii. To a great extent
   iii. Neither great nor small extent
   iv. To a small extent
   v. To a very small extent

b. Department (where you currently work)
   i. To a very great extent
   ii. To a great extent
   iii. Neither great nor small extent
   iv. To a small extent
   v. To a very small extent

24. Do any of these differences cause problems?
   For your neighborhood

   a. Differences in education
   b. Differences in wealth
   c. Difference in social status
   d. Difference between men and women
   e. Differences between younger and older generations
   f. Differences between long-term and recent residents
   g. Differences in political affiliations
   h. Differences in religious beliefs
   i. Differences in race
   j. Other differences
And for your department (where you currently work)

k. Differences in education
l. Differences in wealth
m. Difference in social status
n. Difference between men and women
o. Differences between younger and older generations
p. Differences between long-term and recent faculty
q. Differences in political affiliations
r. Differences in religious beliefs
s. Differences in ethnic or linguistic background/ race
t. Other differences

25. Have these problems ever led to aggression?

For your neighborhood
1. Yes
2. No

For your department (where you currently work)
1. Yes
2. No

26. How many times in the past month have you gotten together with people to have food or drinks, either in their home or in a public place?

27. [IF NOT ZERO] Were any of these people...

<table>
<thead>
<tr>
<th></th>
<th>1. Yes</th>
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<tr>
<td>A. Of different race</td>
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<td>B. Of different economic status</td>
<td></td>
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<tr>
<td>C. Of different social status</td>
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<tr>
<td>D. Of different religious groups</td>
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</tbody>
</table>

28. In general, how safe from crime and violence do you feel when you are alone at home?
1. Very safe
2. Moderately safe
3. Neither safe nor unsafe
4. Moderately unsafe
5. Very unsafe

29. In general, how safe from crime and violence do you feel when you are at your institution after dark?
Empowerment and Political Action

30. In general, how happy do you consider yourself to be?
   a. Very happy
   b. Moderately happy
   c. Neither happy nor unhappy
   d. Moderately unhappy
   e. Very unhappy

31. Do you feel that you have the power to make important decisions that change the course of your life? Rate yourself on a 1 to 5 scale, where 1 means being totally unable to change your life, and 5 means having full control over your life?
   1. Totally unable to change life
   2. Mostly unable to change life
   3. Neither able nor unable
   4. Mostly able to change life
   5. Totally able to change life

32. In the past 12 months, how often have you petitioned government officials or political leaders for something?
   1. Never
   2. Once
   3. A few times (<5)
   4. Many times (>5)

33. Did you vote on the last national presidential election?
   1. Yes
   2. No
APPENDIX D
CAREER DEVELOPMENT INTERVIEW QUESTIONS

Study Part 3- Career Development

Thank you for agreeing to be interviewed for this research. The purpose of this study is to understand the Agricultural Education and Training system in Haiti. Your anonymous responses will provide a deeper insight into this system.

PART A

1. Name: ___________________________________

2. Gender: Male/Female

3. Age: Under 25   26-45   46-55   over 56

4. Highest educational level completed: ____________________________

5. Institutions name: ____________________________________________

6. Position: ____________________________________________________

7. How long have you been in this position? __________

PART B

1. What types of task does your job entail?

2. What is your highest level of education?
   a. Probe: What schools did you attend?
   b. Probe: What are the top 3 skills you learned from school that prepared you for this work?
3. What training have you received from your job?

   a. Probe: did you receive any training from extension or NGOs? If yes, which one(s)?

4. What other jobs have you had in the past?

   a. Probe: How do you think they helped you get where you are today?

5. How did you get to where you are? What pathway did you take to end up to your current position?

   a. Probe: What barriers did you face? How did you overcome them?

6. What do you attribute to your success in this occupation?
a. Probe: What is your motivation?

7. What relationships and networks have facilitated your upward progression in your occupation?

8. What barriers to upward progression in your occupation do you face?

9. Where do you hope to be in 10 years?

   a. Probe: How do you hope to get there?

   b. Probe: What do you hope to accomplish?
APPENDIX E
INFORMED CONSENT

Informed Consent
Analysis of the Haitian Agricultural Education and Training System

Please listen to this consent document carefully before you decide to participate in this study. If you have any questions regarding any part of this study, please ask before you give answers.

Purpose of the research study:
The purpose of this study was to describe the agricultural education and training system in Haiti.

What you will be asked to do in the study:
You will be asked to share information about your educational institution and your career.

Time required:
60-75 minutes

Risks and Benefits:
Minimal to no risk is involved.

Compensation:
There is no monetary compensation for this research. However, there is the satisfaction of knowing that you contributed to the understanding of the Haitian Agricultural Education and Training System.

Confidentiality:
Your identity will be kept confidential to the extent provided by law. Your name will not be used in any report. I will use my notes to assess your information but it will not be traced to you.

Voluntary participation:
Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study:
You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:
Berthrude Albert  Berthrude.Albert@ufl.edu  954.401.6288 OR

305 Rolfs Hall
P.O. BOX 110540
Gainesville Fl, 32607

Whom to contact about your rights as a research participant in the study:
IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433.

Agreement:
I have heard the procedure described above. I voluntarily agree to participate in the procedure.
# APPENDIX F
## IRB RESEARCH PROTOCOL

## UFIRB 02 – Social & Behavioral Research

**Protocol Submission Form**

*This form must be typed. Do not staple. Send this form and the supporting documents to IRB02, PO Box 112250, Gainesville, FL 32611. Should you have questions about completing this form, call 352-392-0433.*

<table>
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<th>Analysis of the Agricultural Education and Training System in Haiti</th>
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| **Principal Investigator:** | Roberts  Grady  
**(Last Name) (First Name)** |
| Degree / Title: | PhD, Professor  Mailing Address: (If on campus provide PO Box address): |
| Department: | Agricultural Education & Communication |
| **UFID #:** | **** |
| **Telephone #:** | **** |

| **Co-investigator(s):** | Albert  Barthude  
**Coordinator:** Research Asst.:  
**(Last Name) (First Name)** |
| Degree / Title: | PhD Candidate  Mailing Address: (If on campus provide PO Box address): |
| Department: | Agricultural Education & Communication |
| **UFID #:** | **** |
| **Telephone #:** | **** |

| **Supervisor (If PI is student):** |  
**(Last Name) (First Name)** |
| Degree / Title: | Mailing Address: (If on campus provide PO Box address): |
| Department: |  |
| **UFID #:** |  |
| **Telephone #:** |  |

| Dates of Proposed Research: | June 1, 2016 - December 31, 2017 |
| Source of Funding (A copy of the grant proposal must be submitted with this protocol if funding is involved): | Self-Funded |
| **Revised January 2015** |  |
Describe the Scientific Purpose of the Study:

According to the World Bank (2015), agricultural development is one of the most powerful tools a country can use to end extreme poverty and boost shared prosperity. Furthermore, Haiti has identified underinvestment in human capital as one of the key issues facing the country’s agricultural sector (World Bank, 2005). Haiti’s agricultural education and training (AET) system, therefore, becomes crucial to ensuring a viable future for the Haitian people. Unfortunately, limited research has been conducted on this system. In fact, no research has yet to even map out the individual institutions within the system. A better understanding of Haiti’s agricultural education and training system is needed in order to identify ways of strengthening the country’s training system, which will in return strengthen its agricultural sector and the country as a whole.

The purpose of this study was to describe the agricultural education and training system in Haiti. The research objectives of this study were as follows:

1. Determine the competencies that AET institutions in Haiti must focus on in order to develop prepared and successful extension workers.
2. Identify how teaching at multiple institutions impacts building, bridging and linking social capital of faculty within the Haitian AET system.
3. Illustrate the pathway key informants have taken to learn the skills and competencies needed for their position within the Haitian Agricultural Extension Advisory Services (AES).

Describe the Research Methodology in Non-Technical Language: (Explain what will be done with or to the research participant.)

Although this is written in past tense, this study has not yet begun.

Phase 1 of this study sought to answer the question, “What competencies do Haitian AET institutions need to focus on in order to develop prepared and successful extension workers?” In order to answer this research question, all tertiary and research and training institutions that offer agricultural certificates recognized by the Haitian government were identified and mapped out. Online research was conducted in order to identify these institutions and then key informants triangulated the data. After a list of institutions was created with demographic information, interviews began. The directors of each of these institutions were contacted and asked for a 60 minute interview. The ones that agreed were then given an oral survey that inquired about whether or not they believed their students possess the competencies laid out by Davis (2015).

Phase 2 of this research sought to answer the question “how does teaching at multiple institutions impact building, bridging, and linking social capital of faculty within the Haitian AET system?” In order to measure this impact, faculty at the AET institutions in Haiti were orally given a questionnaire that measured levels of social capital. The instrument used was formulated using a questionnaire created and tested by Narayan and Cassidy (2001). Faculty were also asked to identify institutions that they have worked at, currently work at and plan to work at within the next 6 months. This questionnaire took 60 minutes.

Phase 3 of the study addressed objective 3, which was to illustrate the pathway key informants have taken to learn the skills and competencies needed for their position within the Haitian Agricultural Extension and Advisory Services (AES). The main focus of this section was to investigate the
professional development and career progression of individuals within a specific section of the AET system, advisory services.

Dalton, Thompson, and Price (1977) created the original model for professional development, which outlined four stages that an individual goes through in their career. Remekamp and Nall (1994) adapted this model and proposed that the four stages within a person's career included the entry stage, colleague stage, counselor stage, and advisor stage. This research interviewed 4 individuals from each of the 4 stages within career development. For this qualitative approach, Purposive sampling was used to select nine individuals within the Haitian AES. Three were A 30-45 minute semi-structured interview was conducted in Haitian Creole with each of the informants in order to understand the pathway they took to learn the skills and competencies needed for their position in the agricultural sector in Haiti. A questionnaire with 10 questions was given to each of the informants. Probing was used in order to understand the social, cultural and political influences on their journey through the Haitian AET system.

These three distinct parts came together to describe the agricultural education and training system in Haiti. The first part of the study built a foundation for the second part, which was ultimately validated through the third part.

Describe the Data You Will Collect: (what are you collecting, where will it be stored, how will it be stored)

The topics covered include
1. Determine the competencies that AET institutions in Haiti must focus on in order to develop prepared and successful extension workers.
2. Identify how teaching at multiple institutions impacts building, bridging and linking social capital of faculty within the Haitian AET system.
3. Illustrate the pathway key informants have taken to learn the skills and competencies needed for their position within the Haitian Agricultural Extension Advisory Services (AES).

All audio recordings will be stored in an secure flash drive along with the field notes.

Audio recordings will be destroyed no later than December 1, 2017. The name of the organization will be used as the identifier for recordings and notes, not the name of the individual responding to our questions. The individual’s name, organizational affiliation, and the date and place of the interview will be maintained in a separate

Please List all Locations Where the Research Will Take Place: (if doing an on-line survey then just state "on-line survey")

All research will be conducted in Cap-Haitian and Port-au-Prince, Haiti

Revised January 2015
log. All reports and publications using the information provided will refer solely to the organization, not the individual respondent.

**Describe Potential Benefits:** There are no direct benefits to the organizations or individuals who participate in these interviews.

**Describe Potential Risks:** (If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.)

The potential risks associated with this research are minimal because we do not probe the individual responsibilities, opinions, or activities of the respondent. All questions deal with organizational activities and accomplishments. We will not identify the names of the individuals who respond in any publication.

**Describe How Participant(s) Will Be Recruited:** (flyers, email solicitation, social media websites, etc.)

Participants from Phase 1 of the study will be identified by online information. All of the directors of the AET institutions will be called and emailed and asked for an interview. Phase 2 of the study will be an interview of all faculty in the higher education institutions within the Haitian AET. They will be called and emailed and asked for an interview. Finally, a key informant will help identify individuals within the Haitian AES to be contacted (emailed and called) for an interview (Phase 3).

| Maximum Number of Participants (to be approached with consent) | 150 | Age Range of Participants: | 18 or Older | Amount of Compensation/course credit: | None |

**Describe the Informed Consent Process.** *(How will informed consent be obtained? Attach a copy of the Informed Consent Document)*

**SIGNATURE SECTION**

Principal Investigator(s) Signature: 

Co-Investigator(s) Signature(s):  

Supervisor’s Signature: 

Date: 5/3/16

Date: 

Date: 

Revised January 2015
What to include in your protocol submission packet

1. Three copies of the signed protocol [containing signatures of all investigators, supervisor (if PI is graduate student), and department chair]
2. Three copies of the informed consent, flyers, or advertisements, interview questions, surveys)
3. If the protocol is funded by NIH provide one copy of the grant proposal.

The review process usually takes 7 to 21 business days. You will receive an email notification about revisions needed to the protocol. If your study is approved, the approval packet will be mailed to you at the address you indicated on the protocol submission form.

You may check the status of your protocol submission at [http://irb.ufl.edu/webtrack.html](http://irb.ufl.edu/webtrack.html)
APPENDIX G
IRB RESEARCH APPROVAL

Study: Analysis of the Agricultural Education and Training System in Haiti

Brief Summary: Analysis of the Agricultural Education and Training System in Haiti
Principal Investigator: Thomas Roberts II
Study Coordinator:
PI Proxies:
Owning IRB Admin: Denise Long
Funding Types: No Funding required to initiate or complete this study
Type of Research:
Assigned Risk: Minimal Risk
Assigned Review Type: Exempt

Exempt Category Assigned:
1. This research will be conducted in established or commonly accepted educational settings, involving normal educational practices, such as research on regular and special education instructional strategies, or research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
2. This research involves the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior. Information obtained is recorded in such a manner that human subjects cannot be identified, directly or through identifiers linked to the subjects. Disclosure of the human subjects responses outside the research does not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects financial standing, employability, or reputation.

Expiration Date: Letter of Approval: View

History
Stamped Docs Revisions Continuing Reviews Reportable Events
Filter by Activity Author Activity Date

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Correspondence from IRB Tue Jun 14 10:12:46 EDT 2016
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11 Items

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APPENDIX H
SUBJECTIVITY STATEMENT EXTENDED

Subjectivity Statement

The lead researcher is Haitian born but has been living in the United States since 1998. The lead researcher has extensive research and development experience in Haiti and currently serves as the CEO of a nonprofit organization that operates in the North Department of the country. The lead researcher travels to Haiti several times a year in order to fulfill the responsibilities she has to the nonprofit. Her duties include overseeing training and educational activities hosted in Cap-Haitien, Haiti throughout the year. Being Haitian born and traveling to Haiti several times a year has contributed to the lead researcher’s deep love for Haiti and the Haitian people.

As the daughter of a Haitian farmer, the lead researcher also had a deep love for agriculture. Although she was not an agronomist and did not have technical agricultural expertise, she deeply believed in the positive impact that agricultural development could have on underdeveloped countries. Furthermore, the lead researcher’s father greatly impacted her views of the vitality of agricultural development throughout Haiti.

The researcher’s strong ties to Haiti and deep faith in agricultural education was monitored so as not to interfere with the data collection and analysis. Because the researcher was the instrument for this study, it was imperative that biases that may have impacted the research process were recognized and report. Strategies to establish trustworthiness helped to minimize the impact of any unidentified biases (Lincoln & Guba, 1985). For example, member check and peer debriefing were used in order to ensure that the bias of the lead researcher did not impact the results, conclusions and interpretations.
LIST OF REFERENCES


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BIOGRAPHICAL SKETCH

Bertrhude Albert was born in Cap- Haitien, Haiti in 1990 and immigrated to the United States at the age of 8 years old. Bertrhude attended the University of Florida and received her bachelor’s degree in English in 2012. As an sophomore Bertrhude co-founded a 501(c)3 nonprofit organization called Projects for Haiti (P4H). During these years she worked towards investing in her country through capacity development initiatives through P4H. Bertrhude decided that the best way to become prepared to support the development of her country was to further her education. As a result, Bertrhude continued her education at the University of Florida, receiving her master’s degree in Latin American studies in 2014. Upon graduation, Bertrhude enrolled in the Department of Agricultural Education and Communication at the University of Florida at received her doctoral degree in 2016 with a focus on international agricultural extension and community development. Upon graduation, Bertrhude accepted a full time position working for P4H.