A comparison of career goals and educational values between Hispanic immigrant and Caucasian United States citizen employees of Louisiana crawfish farm operations

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A COMPARISON OF CAREER GOALS AND EDUCATIONAL VALUES BETWEEN HISPANIC IMMIGRANT AND CAUCASIAN UNITED STATES CITIZEN EMPLOYEES OF LOUISIANA CRAWFISH FARM OPERATIONS

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The School of Human Resource Education and Workforce Development

by

Richard Dean Johnson II
B.S., McNeese State University, 2003
M.S., McNeese State University, 2007
May 2011
DEDICATION

I dedicate this study to the Moguel Tamayo family. My experiences in the Yucatan region of Mexico and desire to understand the culture in the region have proven to be an extraordinary learning experience. These experiences have been a result of the Moguel Tamayo family’s generosity and willingness to allow me to be a guest in their home on multiple occasions. In addition, the Moguel Tamayo family has been a primary source of inspiration and I would never have been able to complete this study without their support and recommendations.

I would also like to dedicate this study to the population of migrants who have left their homes in search of a better life and the ultimate pursuit of happiness. Thank you.

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Me gustaría también dedicar este estudio a la extensa población de migrantes, quienes han dejado sus hogares en busca de una mejor vida y de la felicidad. Gracias.
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ABSTRACT

Hispanic immigrants come to the United States with hopes to obtain a better life for their families through perceived better wages and educational opportunities. One source of income for Hispanic immigrants is through employment in crawfish farm operations. Crawfish farm operations benefit from the employment of Hispanic immigrants through government programs that supply workers to the industry. Therefore, many crawfish farm operations in Louisiana employ both Caucasian U.S. citizen and Hispanic immigrant labor to operate efficiently.

The purpose of this study was to compare selected characteristics of crawfish farm workers as well as to explore values related to education, monetary values, career expectations, and perceptions of migrant workers held by each ethnic group. The results of this study indicated significant differences associated with Hispanic immigrant and Caucasian U.S. citizen crawfish farmer’s educational backgrounds, demographics, monetary values, career values, and perceptions of migrant workers.

The Hispanic immigrants are younger and have a lower overall educational attainment than the Caucasian U.S. citizens. Also, education is equally important for Caucasian U.S. citizens and Hispanic immigrants. Hispanic immigrants perceive monetary earnings and migrant workers as more important than is perceived by Caucasian U.S. citizens; while Caucasian U.S. citizens perceive career plans and working on crawfish farms as more important than is perceived by Hispanic immigrants.

The results of this study can be used by extension services and other educational programs to direct future educational activities based on collected information related to values and perceptions of crawfish farm employees in Louisiana. These activities can enhance the value of extension and educational programs that are meant to serve all populations in Louisiana.
CHAPTER 1: INTRODUCTION

Rationale

Many Louisiana farm operations employ a culturally and ethnically diverse group of workers. The southeastern United States has seen the most rapid growth of Hispanic immigration; however, the widespread population of Hispanic workers in agriculture remains understudied and has proven very difficult to reach for studies due to vulnerabilities of this population (Parrado, McQuiston, & Flippen, 2005). In the agricultural industry, Hispanic immigrants (see definition on p. 24), Caucasian U.S. citizens (see definition on p. 24), and African-Americans comprise approximately 43.0, 48.7, and 4.0% of hired farm workers in the United States, respectively (Kandel, 2008). Within the entire agricultural industry in Louisiana, between 10 and 18% of farm employees are Hispanics that are permitted to immigrate under government visa programs (Garcia & Martinez, 2005). These programs recognize the value of the Hispanic immigrants and therefore help realized the economic benefits to both farm managers and the Hispanic immigrant employees (Garcia & Martinez, 2005). Farm managers participating in these government visa programs can increase farm operation efficiency by increasing production while decreasing labor costs, as farmers are allowed to pay Hispanic immigrant workers at reduced wages and are not required to provide other job-related benefits (Garcia, 2005).

Rochin stated that the corporate and governmental changes in American agriculture related to farm size and management will eventually result in greater regulation of farm labor employment (1999). This increased regulation could ultimately lead to fewer employment possibilities for domestic farm workers and resulting in a greater need for current farmers to seek alternative sources of labor, which includes various forms of foreign labor (Rochin, 1999).
According to Cuevas de Caissie, people view Hispanic immigrant labor in many different ways, both positively and negatively (2008). One view held by some U.S. citizens is that Hispanic immigrant labor helps the economy by providing work at reduced wages, while an opposing view suggests that Hispanic immigrant labor displaces many current U.S. citizens, thus contributing to higher unemployment rates within the United States (Cuevas de Caissie, 2008; Wong-Rieger & Quintana, 1987). As of January 2000, over 4.8 million unauthorized immigrants were estimated to be living in the United States (Fisher, Marcoux, Miller, Sanchez, & Cunningham, 2004), which is perceived as a threat to the U.S. economy in the view of many U.S. citizens, while others feel the employment of foreign labor is necessary for a thriving market economy. However, Heise (2002) and Rochin (1999) have pointed out that many Hispanic immigrants, including those that are undocumented, have contributed widely to the advancement of American agriculture as well as provided labor for other industries.

Hispanic immigrant workers who participate in government visa programs are often paid below the U.S. average minimum wage and may therefore appear to be exploited or overworked at wages that seem unacceptable, causing a lifestyle change and potential disadvantage when compared to other ethnic groups; however, this is not the case, according to Cuevas de Caissie (2008). Every year people from Mexico, the leading source of legal immigration (see Figure 1), choose to come to the United States seeking a better way of life through increased wages (as defined by the theory of human capital) (Cuevas de Caissie, 2008). In addition, better education for their children is a goal for many immigrants from Mexico (as defined by the assimilation theory) when compared to living conditions in their home country (Cuevas de Caissie, 2008; U.S. Census, 2005).

The source of income for a majority of these immigrants is unknown (Cuevas de Caissie, 2008); however, Hispanic immigrant workers in the government-supported programs can earn an
income considerably higher compared to wages that could be earned through other means in their
countries of origin (Cuevas de Caissie, 2008).

Figure 1.  Geographical distribution of birth locations of farm employees working in the United
States. Taken from “Findings from the national agricultural workers survey: A
demographic and employment profile of United States farm workers,” by the U.S.

In addition, the employment opportunities provided by these government programs allow
Hispanic immigrant workers to work toward a greater goal: an improvement in the quality of life
for their children by providing the financial means to obtain a meaningful educational
background (Cuevas de Caissie, 2008). The educational success of children is influenced by
many factors; one of these factors comes from the ideals of parents (Batalova & Lowell, 2007;
Gaetono, 2007). From the perspective of the American ideal, the basis for a successful career is
through a stable educational background (Gaetono, 2007). Both Hispanic immigrants and
Caucasian U.S. citizens may have varying viewpoints and expectations of their children in terms
of perceived educational success (Farner, Rhoads, Cutz, & Farner, 2005). However, given that a
large proportion of Hispanic immigrants coming to the United States enter the workforce
immediately as a stipulation through the government farm programs, educational success for
Hispanic immigrants is not viewed as a selfish goal, but an aspiration to be attained by their
children (Farner et al., 2005). Vega and Sribney stated that as the population numbers continue to grow, the need and desire to learn English and subsequently, higher standards of educational achievement have become an increasingly important objective for the Hispanic population (2009). Specifically in Louisiana, the population of Hispanic immigrants that remain in the area after completion of relief work from natural disasters, such as Hurricane Katrina, stay to work in the agriculture or construction industries (Fussell, 2009). In the context of Hispanic immigrant farm labor and the value of education to both (American and Hispanic immigrant) cultures, the primary purpose of this study was to compare the perceived importance of employment in crawfish farm operations, educational values, monetary values, and values placed on migrant labor by ethnicity (Hispanic immigrants and Caucasian U.S. citizen) of Louisiana crawfish farm operation employees.

Across the southern United States, increases in overall agricultural and construction labor diversity have been documented. While the total number of small farms has been dramatically decreasing, the total number of Hispanic farm managers or leaders has increased, but this is not representative when compared to the populations of labeled leaders in other industries and politics (O’Sullivan, 2000).

Another factor that is a growing concern in agriculture is the aging population within many agriculture commodities, including the current crawfish farm industry employees and management. The average age of farm owners across the United States is over 55 years old, while the hired farm labor average age is under 35 years old (Martin, 2002). As the current population of agricultural employees increase in age in the United States, there is a growing need to assess where the field of agriculture will find a new population of farm employees and to what extent educational outreach will be a necessity in the future to these incoming employees (Martin, 2002).
As the Louisiana State University Agricultural Center (LSU AgCenter) has also significantly noted a growth of Hispanic immigrants in Louisiana, a response agenda has been created to assess the needs of this quickly developing population and culture as it assimilates into the environment by the creation of the Hispanic Outreach Task Force. Agriculture outreach must recognize this growing agriculturally centered Hispanic population and respond to the overall changing workforce (Garcia, 2005; O’Sullivan, 2000). While designing educational curricula that best suit the needs of the Hispanic immigrant population, Farner et al. (2005) stated that traditionally younger students as well as adult learners have a need for multiple high impact program designs that would enhance the overall knowledge base and incorporate new styles of education. Students (whether it be traditional students or adult learners) from Hispanic backgrounds respond to and desire an educational setting that offers multiple diverse learning styles and opportunities as already offered in many agricultural extension programs that cater to primarily English speaking clientele (Farner et al., 2005).

Groups in education tend to achieve at a much higher rate if a purpose is recognized by all stakeholders involved (Driscoll, 2003). Delgadillo (2003) indicated a great need to gain attention and meet the needs of clients as an objective measurement of a program’s success and potential future for development. When consulting monolinguisitc Hispanic immigrants, one must be very aware of body language, because this will be the key point in consulting and communication with a culture that may not speak or comprehend the language (Delgadillo, 2003). If educators were to become more aware of social climates and variations in culture, this increase in awareness would help increase the perceived value of education by participants in educational programs through leadership development (Delgadillo, 2003). Delgadillo also indicated that maintaining facial expressions and contacts that are positive will enhance teaching
and learning techniques when consulting the educationally diverse Hispanic immigrant population, even when a language barrier becomes prevalent in the educational settings (2003).

A recognized observation made by many extension programs identifies and suggests that a Hispanic focus group should be present in many rural communities (Delgadillo, 2003; Malek, 2002). Extension programs should focus on the large group of growing Hispanic immigrants who have educationally centered needs in the fields, such as learning the English language and safety standards that can be easily understood and implemented in everyday workforce (Malek, 2002). When assessing the needs of clientele, previous studies have indicated that Hispanics, as a majority, desire opportunities to learn on the job through guidance (Farner et al., 2005).

In order to improve agricultural practices and trust in the agriculture community served, educational entities that are providing educational programs must make an effort to contribute to the body of knowledge within the specified industry that the Hispanic individuals have a reported invested interest as stakeholders in order to have supporters from the industry (Farner et al., 2005; Martinez-Espinoza, 2003). However, agriculture extension agents that have been surveyed in previous studies tend to have a misinterpretation of Hispanic immigrant farm worker knowledge levels of policies with regard to pesticide exposure based on conclusions stated in studies related to communication difficulties and agriculture safety (Rao, Arcury, Quandt, & Doran, 2004). Exceeding outreach expectations of the Hispanic immigrant community will ultimately enhance an agricultural education extension program as well as improve farm management practices by growing relationships and trust among all stakeholders involved (Martinez-Espinoza, 2003). When consulting and educating in extension programs and workers, it is important for respondents as well as educational leaders to also recognize and stay informed of changes in immigration and public policy and communicate potential needs of the Hispanic population as well as the agriculturally centered policies on farm management (Rao, 2004).
Hobbs (2004) indicated the need for agricultural extension and education to provide programs that are diverse among populations, including the Hispanic community. Hobbs also stated an imperative need to respect and gain knowledge of the cultural variances and differences associated with the Hispanic populations (Hobbs, 2004). The Hispanic culture has continually been impacted by abrupt cultural and environmental changes over the past century because of instability in political control and public policy changes in the United States (Hobbs, 2004). Previous studies did not primarily indicate the use of quantitative data in agriculture research; therefore, the need for an assessment related to objective data in Louisiana would prove much more beneficial to extension through the application and adaptation of survey analysis as well as forming a framework for future studies with the growing Hispanic population.

When learning from the Hispanic population, it is important to stay involved with the community and the population that regularly contributes to community efforts in education in order to develop programs that are of interest to clientele (Gregory, 2006). Motivation for community involvement in the Hispanic population includes respecting the culture and motivation of the family community as well as the surrounding community in agriculture (Gregory, 2006). Therefore, a relationship between the farm operators and farm workers being surveyed must be developed as a foundation within the agriculture extension community in order to enhance the current and future educational outreach programs provided by the agricultural education and extension services.

The intention of this study was to gain an understanding of the values and perceived importance related to educational goals and achievement regarding the growing Hispanic community in Louisiana, specifically in relation to Caucasian U.S. citizens compared to Hispanic immigrants that work in crawfish farm operations. In addition, this study examined whether the current Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees have a desire to
continue working in crawfish farm operations or if aspirations for children to work in crawfish farm operations in the future existed. The results of this study will help educators to design educationally centered programs that can positively influence the growing population at a higher achievement rate. Due to the increasing average age of current farm managers and landowners, there is a need to assess the potential futures of crawfish farming operations and potential responses that would be deemed essential for assisting in transitions and to maintain agricultural stability. In many cases, landowners lease these farms to workers and operators who have no stake in the future of the land value own farms; therefore, it is plausible that educational entities could assist these workers in developing goals for career and educational development. Many smaller operations have also been documented where the farmland owner is also the manager; therefore, the studies recognized the need to ensure confidentiality with responses received by all respondents.

**Problem Statement**

Many of Louisiana’s crawfish farm employees are Hispanic immigrants. Their families occasionally or eventually accompany these employees when they immigrate to the United States. No information exists regarding the unique educational and career development needs of these employees and their families. This study was designed to compare the career goals and educational values held by Caucasian U.S. citizens with that of Hispanic immigrants while also investigating the potential for employees to become long term crawfish farm operation employees (Hispanic immigrants as well as Caucasian U.S. citizen workers).

**Purpose and Objectives**

The purpose of this study was to compare career goals and educational values of Caucasian U.S. citizens and Hispanic immigrants that are employed in Louisiana crawfish farm
operations in order to assist educational and agricultural extension programs to better serve the
communities where crawfish farms exist. The objectives of the study were as follows:

1. Describe and compare the demographic and personal characteristics of Louisiana
crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic
immigrants. The characteristics that were being compared are:
   a. Gender
   b. Ethnicity
   c. Age
   d. Number of years working in crawfish operations
   e. Educational attainment
   f. Country of citizenship
   g. Seasonal or permanent employee
   h. If crawfish farming is primary job
   i. If first year in the United States

2. Describe and compare the value placed on education in general by Louisiana
crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic
immigrants.

3. Describe and compare the value placed on education of children by Louisiana
crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic
immigrants.

4. Describe and compare the value placed on monetary earnings by Louisiana crawfish
farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants.

5. Describe and compare values placed on career plans of Louisiana crawfish farm
employees whether they are Caucasian U.S. citizens or Hispanic immigrants.
6. Describe and compare crawfish farm employees’ levels of importance related to working on a crawfish farm operation by whether they are Caucasian U.S. citizens or Hispanic immigrants.

7. Describe and compare crawfish farm employees’ perceptions of the value placed on migrant workers in the agriculture industry whether they are Caucasian U.S. citizens or Hispanic immigrants.

**Significance of Study**

Many farm operations utilize Hispanic immigrant labor to operate efficiently and at a low cost. The purpose of this study was to compare educational expectations and perceived levels of success between Caucasian U.S. citizens and Hispanic immigrants that are employed and involved with multiple government visa program grants that support the use of Hispanic immigrant workers at a lower overall labor cost in order to successfully operate. The information obtained through the administered surveys provided insight into the opinions of Hispanic immigrant and Caucasian U.S. citizen laborers in terms of educational expectations for future generations through a direct comparison of educational experiences, expectations, aspirations as well as career expectations and as they relate to current job and career situations in their lives. In addition, with the aging population of current crawfish farm operation owners, managers, and workers, the agriculture extension and educational service entities should respond by discovering the intentions and future expectations of these farm owners, managers, and workers of the future crawfish farm operations in Louisiana and develop programs that will best serve this growing diverse community.

Identifying differences in Louisiana between Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees as they relate to educational values and career goals could assist in the future design of adult educational activities and extension programs that would
benefit all crawfish farm employees, as they are the primary workers and educational audience in Louisiana crawfish farm operations. In addition, the information from this study provides a better understanding related to the educational backgrounds of Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees currently employed in Louisiana crawfish farm operations and can assist in the development of higher impact extension and education programs that could create atmospheres of increased lifelong learning achievement and cooperation between the populations.

As the ownership and management personnel of the crawfish farming industry ages, there is a growing concern for the future plans of the agriculture industry in general. Through observation, many crawfish farm operations have landowners with tenant farmers who operate and manage land within specified lease agreements. However, even these tenant type farmers tend to be aging along with the landowners, which results in an unmeasured potential that the urbanization of farmland may surpass usage in terms of profitability in continuous crawfish farm operations when compared to the ability to create a suburban area through the selling and distribution of property for urban development.

There are multiple categories of immigrants with different educational, financial, and experience backgrounds who are employed in Louisiana crawfish farm operations. Many Hispanic immigrants are employed in the crawfish farming industry for short amounts of time (a few weeks for peak season). Others are seasonal (in which they return to their countries of origin and return to U.S. crawfish farm operations for the season, typically November through June); while another group have become a permanent part of the Louisiana crawfish farming operations (working either through reapplication of visas or as undocumented workers). Another group of the growing Hispanic immigrant worker population is the number of workers that remain after natural disaster work efforts such as the one after Hurricane Katrina in New Orleans (Fussell,
In this case, many Hispanics migrate into the area in order to work in the construction industry but may seek employment in the agriculture industry once the initial construction job objectives in the rebuilding efforts are completed (Fussell, 2009).

Many of these Hispanic immigrant crawfish farm operation employees in Louisiana are married and may have children who may not be with them, depending on the family situation and documentation status. This study investigated what educational values and employment aspirations Hispanic immigrant employees on crawfish farm operation in Louisiana have for their families and children compared to their Caucasian U.S. citizens counterparts. The results of this study may be used to assist extension with designing and implementing high impact programs that would best benefit Hispanic immigrant and Caucasian U.S. citizen crawfish farm employees in terms of making better decisions for the educational and career benefits for themselves and their families.

**Conceptual Framework**

Previous educational research studies directed toward the Hispanic immigrant population have been designed to meet the needs of the populations of ethnically diverse groups of students enrolled in educational settings in many highly populated urban areas as opposed to rural agriculturally centered areas in the United States. Fry (2002) investigated ethnically diverse students who completed traditional education (earning a high school diploma) in the United States, but seem not to be as successful in earning a degree through post-secondary educational settings (community colleges and universities).

Studies have concluded that students who have been in the United States for longer intervals seem to achieve at a higher rate as measured by educational achievement and perceived financial stability than students who assimilate into the United States but are residents for shorter periods of time (Fry, 2002; Hurtado, Carter, & Spuler, 1996). In comparing Caucasian U.S.
citizens and Hispanic immigrants, McWhirter, Torres, Salgado, and Valdes (2007) stated, “Mexican American students are expected to encounter more ability barriers, that is, those associated with having the ability, talent, and confidence to succeed, fitting in, and the support of friends for their plans, than their White counterparts” (p. 132). Therefore, educational leadership should assess this population and respond accordingly in order to enhance the education systems that serve this diverse population (McWhirter, 2007).

Goldenburg, Gallimore, Reese, and Garnier (2001) completed a longitudinal study comparing parents’ aspirations and expectations of their children from pre-kindergarten through grade six. The researchers concluded that there were high aspirations for students, but as school years progressed, the overall expectations leveled with the paralleled school performance of the child (Goldenburg et al., 2001). This study has relevance to the Goldenburg study due to the nature of aspiration and expectation related questions being asked in the survey instrument developed for the study. Although the survey data collected were for one season, the inquiries were centered on the expectation and aspirations of parents with regard to their own educational history and the educational and career expectations and aspirations for their children.

Acculturation and assimilation explain the transition of a specific group into a new environment and subsequent culture influence into the family structure (Hoppe, Heaney, & Fujishiro, 2010). Through the acculturation and assimilation framework theory for migrant studies, there are reported trends associated with society interactions, education and personal value factors that play an important role in the work and personal, mental, and physical health of individuals, as well as in family structures in Hispanic communities (Hoppe, 2010).

Hurtado (1996) used an instrument taken from the Student Adaptation to College Questionnaire (SACQ) in order to assess students from Hispanic backgrounds and measure student’s stress levels in relation to academic adjustment, social adjustment, personal-emotional...
adjustment, and attachment with relation to how long students have been in the United States and the amount of educational achievement individuals had attained. Although these students were not from agricultural related careers, the research techniques used in the Hurtado study are similar to those in this study and the results can be related to this study in relation to farmer adjustment and assimilation to new environments such as Louisiana crawfish farm operations.

Similarly, Borjas (1982) concluded that assimilation proved to be a factor in Hispanic populations and the amount of education attained. In addition, there was a higher belief system found in some Hispanic groups when compared to others as to the amount of income and the need for educational attainment in the United States when compared to the amount of time spent in the United States (Borjas, 1982; Lichter & Johnson, 2009; Warner, Fishbein, & Krebs, 2010). Borjas (1982) and Warner et al. (2010) stated that the more time spent in the United States, the more likely that educational attainment would become prevalent, and an increased income across the population would be observed.

McWhirter’s study focused on student achievement and potential rate of success when coming to the United States at an age where high school is a part of a student’s life; however, studies have also been completed examining Hispanic involvement in the workforce (Maldonado, 2006). Maldonado’s study indicated that educators and educational enhancement entities in the United States are facing a rapidly growing population of students that lack the resources to obtain a quality education (2006). These results indicated that improved educational responses to ethnically diverse, as well as the Hispanic population, are necessary for the overall improvement of educational settings and increased success rates in school settings in order for a population which may not be properly served in traditional school settings to develop as an assimilated community.
Rao (2004) also completed a survey instrument to assess knowledge of Hispanic farm workers. However, the topic of consideration within the instrument centered on farm worker pesticide exposure knowledge: comparing growers’ and extension agents’ perceptions of Hispanic farm worker’s pesticide exposure. The results of this study indicated an overall lack of knowledge among the farm workers when pertaining to the legalities of pesticide usage and exposure. Rao’s study (2004) was completed as a focus group of 50 Hispanic farm workers who concluded that there was not much safety precautionary practice or educational knowledge being introduced to the field when pesticides were present. Rao’s study (2004) included a specific farm area where many pesticides were being applied throughout a season. In Louisiana, crawfish farm operations, there are labels and uses for many pesticides in operations, but currently programs are not available to train employees in pesticide handling and application. However, the survey instrument and the information reported by the researcher provided a baseline for programs to be developed that could be applicable to the agriculture extension service and educational program development.

Farner et al. (2005) completed a qualitative study utilizing focus groups of Hispanic farm workers in order to assess current perceptions and to obtain information related to the educational needs of the Hispanic population as an evaluation model for response to be used by extension educators to improve outreach programs. Through multiple discussions, Farner et al. concluded best methods for instruction as well as an increased desire to learn by the population focus group in Illinois (2005). However, there seems to be a lack of availability for educators to make this outreach possible due to distance, populations numbers, and educators available (Farner et al., 2005). This qualitative survey provided a needs basis for extension and educational outreach for many farm operations in the United States. Crawfish farm operations in Louisiana may prove to be similar in needs and educational expectations.
This study was designed to be quantitative in nature through obtaining descriptive information by comparing educational aspirations and expectations, monetary values, career goals related to crawfish farm operations, and perceptions of migrant worker importance between the Hispanic immigrant population and Caucasian U.S. citizens in crawfish farm operations in Louisiana. The survey instrument was designed by the researcher from resources found in extensive literature reviews and utilized similar data from focus groups studied; however, data analysis offers more objective results in terms of quantitative analysis and comparison between the Hispanic immigrant farm worker population and the Caucasian U.S. citizens surveyed in the study. There was also an element of inquiry included in the instrument to discover the intentions and the aspirations to continue crawfish farming in future seasons from the perspective of the crawfish farm worker.

**Theoretical Framework**

The theory of human capital is an objective list of variables that provides potential reasons for the migration and settlement of many populations (Boras, 1982; Wood, Ribeiro, & Hamsho-Diaz, 2010). The human capital theory was used in this study through analysis of responses received to the survey instrument administered. The human capital theory states that populations will migrate to new territories in search of better sources of income and will settle in areas of perceived prosperity (Borjas, 1982; Haas, 2010; Wood, 2010). There is a view that migration to new territories is an investment for the future of many Hispanic families (Borjas, 1982; Haas, 2010). For Hispanic migrants from Mexico, there tends to be a greater investment opportunity because of the ability to return home easily, where many Hispanics from countries not bordering the United States may have more difficulty due to distance (Borjas, 1982). Therefore, it may be more likely for Hispanic immigrants from Mexico to work in agriculture and return home seasonally than it would be for Hispanic immigrants from other countries,
which often results in family settlement and development (Borjas, 1982; Haas, 2010). Problems associated with human investment theory are associated with the diverse rate of assimilation within the new surroundings of the United States (Borjas, 1982). It is concluded that if Hispanic immigrants within the United States have the support from established persons, the rate of success in assimilation is increased with time and the population then becomes immigrated as opposed to migrant in nature (Borjas, 1982; Haas, 2010; Wood, 2010).

The sustainable livelihood strategies model (which states that as time progresses, subsequent generations tend to assimilate into new surroundings much more rapidly than initial generations) (Valdivia, et al., 2008) also follows along the human capital theory and social cognitive theory. Valdivia et al stated that Hispanic immigrants attempting to assimilate within the U.S. agriculture industry respond with increasing success as each successive generation interacts more often in response to educational opportunities that offer interaction with U.S. citizens (2008). This is supported by social cognitive theory that indicates community involvement through increased educational opportunities and the inclusion of all persons involved allows Hispanic immigrant workers to enhance assimilation rate by offering support and information for not only agriculture workers, but the families of those workers as well (Stallones, Acosta, Sample, Bigelow, & Rosales, 2009).

This study investigated the Hispanic immigrant population’s aspirations for higher educational attainment as well as investigated the ethnic differences between aspirations for educational attainment by the workers and their children and the idea that educational attainment will also lead to financial success. In addition, as farming operations tend to become larger and more commercialized, the employment of Hispanics and other economically unequal populations has become more prevalent (Stretesky, Johnston, & Arney, 2003). Therefore, the future of
agriculture operations may become more dependent on immigrant labor in order to be economically sustainable (Stretesky, 2003; Wood, 2010).

The assimilation theory that governs many ideas associated with immigration in the United States also provided a framework for this study (Altschul, Oyserman, & Bybee, 2008; Alba, 1997; Portes, 1997). Although the assimilation theory has come under criticism due to the worldwide development of immigration and inconclusive measurements available for varying countries, Alba and Nee (1997) stated that the assimilation theory provides the strongest framework for analyzing immigration assimilation into the United States. Another problem associated with the assimilation theory is that many people want to preserve their heritage and willfully maintain cultural identities while remaining successful in the American workforce; therefore, acculturation may be a step toward complete assimilation (Alba, 1997). For this study, assimilation is defined as “. . . the social processes that bring ethnic minorities into the mainstream of American life” (Alba, 1997, p. 36). Assimilation theory states that as time passes, subsequent generations of immigrants will become more mainstream in society and will not be considered as foreign immigrants due to their ability to identify easily within societal norms (Alba, 1997).

There is also segmented assimilation as identified within the assimilation theory, which is related to social identity theory, that states many individuals assimilate in different areas of society based on the amount of education, social constructs, political influences, and economic surroundings provided to them by the community (Altschul, Oysermann, & Bybee, 2008; Johnson & Marchi, 2010). There is a correlation between educational achievement, social constructs, and political influences; and the rates of success in education found when measuring the rate of assimilation in identified migrant populations within ethnically defined communities (Altschul, Oysermann, & Bybee, 2008; Johnson & Marchi, 2010).
Acculturation is defined by the minority group’s ability to incorporate lifestyle changes into their previous cultural identity (Alba, 1997; Wong-Rieger, 1987). Acculturation may take place in the agricultural sector within the Louisiana crawfish farming industry as Hispanic immigrants learn to harvest, manage, and market within the crawfish farm operations, while also preserving their own cultural belief systems (Finch, Do, Frank, & Seeman, 2009). Assimilation takes place when a minority culture replaces its own beliefs with beliefs of the majority population; such assimilation often takes place in the Americanization of immigrants (Finch, 2009; Wong-Rieger, 1987). Utilizing the assimilation theory (Alba, 1997), Hispanic immigrants working in the crawfish industry should become more accustomed to operations and marketing in the industry as time progresses. Equality through socioeconomic assimilation should be observed over time with regard to educational attainment, income, and expectations in comparison and in relation to the region and surrounding communities affected (Alba, 1997; Finch, 2009).

In addition, the assimilation theory states that children of Hispanic immigrants should become more successful and fall within patterns common to Caucasian U.S. citizens within the same industry and region (Alba, 1997). As a population assimilates in a common region, perceived discrimination should disappear and the minority’s separate identity should decline as time progresses (Alba, 1997; Finch, 2009). According to the assimilation theory, Hispanic immigrants should be able to become an integral part of the agricultural community and be fully accepted by the agriculture industry and surrounding communities (Alba, 1997). Analyzing the survey instrument results were used to determine whether Hispanic immigrants have an interest in pursuing crawfish operation management as well as Caucasian U.S. citizens’ interest to assist Hispanic immigrants in assimilating into the crawfish farming industry as permanent workers in the future through educational assistance and support. Theoretically, as generations change in
the crawfish farming industry, Caucasian U.S. citizen crawfish farm employees and managers should become more accustomed to the Hispanic immigrants who continually work within the industry (Finch, 2009). As generations continue to change and the length of time Hispanic immigrants have spent in crawfish farm operation employment grows, the assimilation theory states that the effects observed and perceived among different crawfish farm employee ethnicities should reduce and become equal within the variables of financial income and educational aspirations and values.

Assimilation theory with regard to the human capital theory and Hispanic immigrants in agriculture is not well studied; however, immigrant entrepreneurs have played important roles in defining the assimilation of U.S. immigrants from other countries throughout history (Alba, 1997). Research suggests that within assimilation theory is a biculturalism that demonstrates a sense of increased assimilation within immigrant populations to new environments as time passes with more interaction among all stakeholders occur (Gimpel & Lay, 2009; Wong-Reiger, 1987). Within biculturalism, the minority population will adapt to surroundings but will tend to preserve many beliefs and heritage while maintaining a sense of success within the new social atmosphere (Wong-Reiger, 1987).

Previous problems associated with analysis of the assimilation theory has been tied to the fact that Hispanic immigrants who are less educated and/or undocumented tend to group themselves in specifically isolated locations or communities, thus blocking themselves from typical American influences and potentially assimilating environments (Alba, 1997; Borjas, 1994). This isolation, as well as potential migration patterns within this context contributes to the segmented assimilation theory and the inability of Hispanic immigrant workers to improve in lifestyle dynamics (Kalogrides, 2009; Johnson & Matchi, 2009). Geographical isolation of immigrants also contributes to problems associated with the children of the Hispanic immigrants
in terms of assimilation into society primarily because the surrounding Hispanic immigrant community structure does not regularly allow for educational and economical enhancement due to lack of contact and trust with outside communities (Alba, 1997; Gimpel, 2009).

Although segmented assimilation occurs in agriculture, within the crawfish farming industry, communication and continual interactions between Hispanic immigrants and Caucasian U.S. citizen is commonplace during harvesting or specific work hours where cooperative work is necessary. This interaction and communication enhances the potential for assimilation as time progresses (Johnson & Matchi, 2009). However, many Hispanic immigrants and Caucasian U.S. citizens will remain separated outside of work hours and many Hispanic immigrants may not take part or cooperate in educational enhancing or civic opportunities that are offered by the community and/or educational entities (Johnson & Matchi, 2009). This study sought to answer questions relating human capital theory and assimilation theory by collecting data through responses provided by the population sample with regard to the amount of time spent in crawfish farm operations and the education expectations and aspirations centered responses to the survey instrument as well as values places on monetary earnings, migrant worker presence in agriculture, and the future career aspirations of crawfish farm workers in Louisiana as they compare to Caucasian U.S. citizens in the same commodity workplace environments. In addition, this study was designed to obtain perceptions of Hispanic immigrants and Caucasian U.S. citizens in relation to migrant workers in crawfish farming operations in Louisiana and the potential for a younger growing leadership group to emerge and develop through educational outreach.

**Limitations to Study**

This study addresses Hispanic immigrants who are in Louisiana employed on crawfish farm operations. The population available was limited to those in the contact list (via telephone
or email) available from the LSU AgCenter crawfish contact list. This contact list corresponds with the number of crawfish farmers found in the Louisiana Agriculture summary provided by LSU research and extension professionals who work with crawfish farm operations (Louisiana Agriculture Center, 2009). There are various other areas of employment and multiple forms of motivation for the Hispanic immigrant population to seek work away from their original country other than crawfish production or agriculture; however, this study focused on the crawfish farm employees who were present in the crawfish farming industry during the sampling period. This study specifically surveyed those employees who were working on crawfish farms in Louisiana during a specified crawfish season (January 2011- February 2011). The study considered the length of time and recognized that there may potentially be only one parent responding to the survey. Whether a bias existed between fathers’ and their aspirations for their children’s achievement and/or mothers’ aspirations for their children’s achievement could not be differentiated due to the potential displacement of the Hispanic immigrants and their families. This was also true in many Caucasian U.S. citizens surveyed. There may have only been one parent response for aspirations of children and the expectations of that parent will be considered the expectation as the crawfish farm employee as opposed to the entire family's aspiration for their children’s educational achievement and success.

Also, the dates on which surveys were gathered occurred during peak immigrant worker hiring for the traditional crawfish harvesting season, but could miss potential H2A visa (see definition on p. 24) respondents who may have arrived for short periods of time as opposed to an entire harvesting season (November 2010-June 2011). The number potentially missed would tend to be minimal due to the industry traditionally receiving visa respondents in large numbers during January. Also, the exact number of estimated Hispanics working in the crawfish industry were uncertain due to potential documentation status as well as the number of H2A applicants
and the deemed need from crawfish farm management for specific workers at a specific point in time. Because of the vulnerability of the population, the researcher obtained information through personal visitations and paper passed instrument distribution in order to obtain a higher response rate and to ensure accessible populations were reached.

Respondents may not have been truthful in their responses due to potential government mistrust or cases where workers were undocumented; however, through personal correspondence and confidentiality statements of responses received by the researcher as well as between the employees completing surveys and the farm managers, the potential for dishonesty or invalid responses was minimized. Also, participant refusal to cooperate when compared to respondents who choose to cooperate in the study may have resulted in differentiated data collected by the researcher. Respondents may have refused to complete instruments for many reasons, but potential illiteracy rates among workers may have played a role in the participant’s refusal to cooperate in the study.

The findings reported in this study can be generalized to the populations of crawfish farm workers in Louisiana, but are not intended to reach into other commodities. In addition, the data was reported by crawfish farm workers during one season of crawfish farming and individual characteristics related to the time of year as well as number of farm workers present at the time of sampling may play a role in responses received.

The survey instrument was designed and construct validity was addressed by using a panel of field experts in the crawfish industry to verify that items in the survey instrument formed valid constructs. However, the instrument was designed specifically for this study and items could be misread or misinterpreted by respondents.

**Definition of Terms**

For the purpose of this study, the following terms are defined as follows:
• **Crawfish farm**: an operation that harvests or processes crawfish from a freshwater pond source, particularly Procambarus clarkii, the crawfish species, which is of the most commercial importance in Louisiana (McClain & Romaine, 2007).

• **Hispanic immigrant**: any person of Hispanic ethnicity (Mexico, Central America, South America, Puerto Rico) that resides in the United States with a historically Spanish speaking background (U.S. Census Bureau, 2005; Vogel et al., 1993).

• **Caucasian U.S. citizen/White**: Any person that is a citizen of the United States and is classified as non-Hispanic, non-African American, or of European ethnic groups who have a primarily English speaking background (U.S. Census Bureau, 2005).

• **H2A Visa**: An agriculture program that establishes a means for employers who anticipate a shortage of domestic workers to bring foreign workers to the United States to perform agricultural labor or services for a temporary or seasonal timeframe (Pastor, 2004; U.S. Department of Labor, 2010).
CHAPTER 2: REVIEW OF LITERATURE

Hispanic Immigrant Workers and U.S. Government Policies

An increasing number of Hispanics moving from a traditionally urban setting society and settling throughout the United States in rural settings has become more commonplace as time progresses (Kandel & Cromartie, 2004; Valdivia, 2008). The overall observations and conclusions made by many studies have shown that many of the Hispanics moving into rural areas of the United States are reported as having low education achievement, low language proficiency with regards to English, and often result in an undocumented status of residency (Kandel, 2004). The specific number of undocumented or unauthorized workers is difficult to obtain due to the sensitivity found among the farm worker population, but is quantified in Figure 2 and Figure 3 as approximately 53% (U.S. Department of Labor, 2005).

Many Hispanics may be undocumented due to having expired visas or simply by being unaware of the need to renew visas at specified time intervals, which may be explained by the large amounts of misinformation or lack of contact related to government officials or authorities that may be perceived as threatening (Pena, 2009). In addition, there has been a history of mistrust between farm policyholders and minority populations due to perceived discrimination (Dyckman, 2002). There have been cases in which Hispanic farm owners, employees, and managers have made allegations of discrimination and problems within the U.S. Department of Agriculture in handling these reported allegations of discrimination in a timely manner (Dyckman, 2002). Therefore, many Hispanic populations may feel it more beneficial to work in agriculture undocumented as opposed to attempting to complete paperwork and proper steps with specific governmental entities that create and uphold legal residency status and various visa programs (Dyckman, 2002; Kandel, 2005). Figures 2 and 3 indicate the diversity of
backgrounds found within government policy and farm workers status in relation to gender and documentation related to ability and documented authority to work in the United States.


Kandel indicated that many migrant family leaders and groups who become assimilated into the culture of the United States will eventually leave their specified ethnic groups for a more diversified community and will increase their overall success rates within the specified region of defined residency (2004). The mainstream population has seen an overall population growth, but more so with regard to the Hispanic populations (Chapa & Valencia, 1993). There has been an increase in the number of Hispanics within the United States that education has failed to respond to in a manner that addresses the needs of this growing population by offering diverse programs that are flexible to allow for everyone interested to participate (Allensworth & Rochin, 1996; Pena, 2009). There is also a self-selection pattern found between Hispanics choosing to come to the United States or remain in their home country; however, this is mainly based on cost comparison as well as family structure as defined by the social capital theory (McKenzie & Rapaport, 2010).

Previous studies have focused on the urban population of Hispanics in many states such as California and Texas, but the growing population in rural areas across the United States will continue to increases substantially as the need for lower cost farm labor resources also increases. (Allensworth, 1996). In addition, the demand for cheaper labor warrants a need for this group of immigrant laborers to be present and available (Allensworth, 1996). Allensworth claims that one cause for the increase in Hispanic population has been due to the increase in demand for increased agricultural production and construction laborers at efficient cost levels to consumers as well as a need for direct labor in these markets due to current shortages (1996). In many forms of immigration, the Hispanic population tends to contain many diverse forms and levels of income and educational backgrounds. There is also an identified diversity within family structures in the United States with relation and definition of distribution within the immigration labor industry (Figure 4, U.S. Department of Labor, 2005).
Through U.S. immigration policy standards and lack of education, many Hispanics tend to remain in the lower socioeconomic level of society (Allensworth, 1996; Batalova, 2007; Lichter & Johnson, 2009). One of the primary ways for policymakers and educators to increase the amount of educational attainment for the Hispanic population through education and extension is to first understand and respect the inevitable growing population diversity (Hernandez, Rochin, & Siles, 2001). There are also a continually growing number of Hispanic immigrants entering the agriculture workforce on a yearly basis that demonstrate a need for extensional outreach and education at rates that have not been previously observed or documented in history (Martin, 2002). There is an exponential increase in population numbers, but as this population tends to increase, so does the widening of the educational achievement gap between ethnic groups defined and correlated by socioeconomic status (Batalova, 2007; Chapa, 1993). If a difference in the education of students in schools and extension settings is to be a result of outreach, it is important to take into account and respond to the great diversity that every population has to offer as an asset as opposed to a hindrance to society (Figure 4) (Hernandez et al., 2001).

There is an observed and prevalent changing demography within the United States (Batalova, 2007; Hernandez, 2001 et al.; Lichter, 2009), with the documented studies and reported changing lifestyle trends of populations with regards to Hispanics needing to become assimilated to extreme and potentially life altering environments. Not only has there been an observed drastic increase in overall ethnic group population numbers by 9%, but the overall Hispanic population has grown by 53% in the United States alone between the years 1990 and 2000 (Hernandez et al., 2001).

While observing and studying the overall growth trend of the Hispanic population, Hernandez noted that the “burden of support” will fall on the shoulders of the Hispanic youths
(2001). This “burden of support” refers to the older generation needing care and the lower socioeconomic classes (including Hispanics) being the primary caretakers. Also, there is not a system in place that will provide retirement or an income for these Hispanic immigrant populations; therefore, it is reported that the Hispanic youth of today would ultimately be forced to work well into traditional retirement age (Hernandez et al., 2001).


When considering poverty as a significant educational factor, 21% of Hispanic families with children under the age of 18 are defined as living in poverty (Hernandez et al., 2001). In Figure 5, there is an obvious distribution of a younger population of workers coming into the agriculture workforce on a yearly basis (U.S. Department of Labor, 2005). There are many reasons for a younger generation to be entering the workforce in the United States, but one of the primary reasons noted is to support their families financially (Hernandez et al., 2001). Although
Hispanics primarily live in poverty, over 80% of the Hispanic population is continuously employed when in the United States and are continually noted for working at the lowest wages compared to other ethnicities in the United States (Hernandez et al., 2001).

![Figure 5](image)

Figure 5. Age distribution of Hispanic farm workers. Taken from “Findings from the national agricultural workers survey: A demographic and employment profile of United States farm workers,” by the U.S. Department of Labor. 2005. Research Report no. 9, Washington D.C.

Another problem with Hispanic laborers being present in the United States noted by Shihadeh and Barranco (2010) is the relationship between increasing Hispanic immigration and African American violence. Shihadeh and Barranco (2010) stated that the offering of low skilled labor jobs to Hispanic immigrant populations places constraints on the African American population in terms of mobility and potential to move higher in a social ladder. However, the goal of the Hispanic population is not to make the United States a permanent home, but to make an income as a laborer and eventually return to their country of origin, whereas the African American population is a permanent resident or classified citizen with a corresponding highly
populated ethnic group in the United States (Shihadeh & Barranco, 2010). However, the rising number of Hispanics becoming permanent residents in the United States that are seemingly not returning has caused controversy among many policy makers (Shihadeh & Barranco, 2010). Also, the divide between the two ethnic groups in the same primary competitive workforce through a reported increase in crime rates in areas where both Hispanics and African Americans reside has become an issue that should be addressed by educators and all stakeholders within the environments and communities involved (Shihadeh & Barranco, 2010).

Therefore, one educational outreach method and action response plan to support these groups should be for educators and extension programs to set objective goals to bring multiple ethnic groups together through multiple educational opportunities or through more opportunities for advanced leadership and employment in various industrial and agricultural sectors (Shihadeh & Barranco, 2010; Hernandez et al., 2001).

With a large and diverse group of Hispanics living in the United States also come the subsequent multiple languages and barriers associated with those languages in common daily communication (Hernandez et al., 2001). Wiese and Garcia (1998) pointed out these language barriers and a need to respond in educational settings with the introduction of the Bilingual Education Act. This act has introduced and highlighted the necessity and has pushed the enforcement for further educating bilingual students as well as to enhance reduction of language barriers through multiple educational opportunities for all ethnic groups, regardless of documentation status (Weise, 1998). This Bilingual education act is a policy set in place to remedy fallbacks experienced by having multiple languages in a school setting, but with no attention given to the fact that the need is still there to educate all students equally, regardless of the current policies or resources set in place (Weise, 1998). This educational policy seems to be
lacking in many educational program areas that serve Hispanic and other minority populations (Weise, 1998). According to the US Department of Labor (2005), there is a primary dual linguistic system of Spanish and English speaking farm workers coming into agriculture operations each year, with Spanish remaining the primary language spoken by farmworkers across the United States (Figure 6). Therefore, observations into a system where there are many identified faults proves that there is still a necessity and duty to ensure that education is provided to all students equally regardless of documentation status (Kandel, 2004).

![Distribution of spoken language of Hispanic farmworkers.](image)

**Figure 6.** Distribution of spoken language of Hispanic farmworkers. Taken from “Findings from the national agricultural workers survey: A demographic and employment profile of United States farm workers,” by the U.S. Department of Labor. 2005. Research Report no. 9. Washington D.C.

Evidence reported in many studies has shown that the second and third generation of Hispanics tend to suggest an overall socioeconomic improvement through assimilation into their surroundings (Kandel, 2004). Although the socioeconomic status has potential to improve for Hispanics in second and third generation families, there is still the need to educate and provide
support for the incoming Hispanic populations that continually are becoming accustomed to the new environmental surroundings (Kandel, 2004; Lichter, 2009). Kandel suggested that it is imperative for policy makers across the United States to create assistance programs that would help increase new Hispanic resident abilities to become productive citizens as they assimilate into a new community (2004).

Surveyed Hispanic families often stated multiple reasons for coming to the United States, but the main reported reasons were to seek new employment, obtain monetary earnings for family while planning to return, and to escape poverty in their home countries (Borre, Ertle, & Graff, 2010; Fussell, 2009). Many of the secondary classified reasons reported by the Hispanic community for individuals coming to the United States included poverty, unemployment, lack of food, and instability in his or her home country; therefore, hope seems to be found in the United States for those who planned to come seeking employment and educational opportunities (Borre, 2010).

Kandel indicated that many Hispanics will come into the United States with jobs rooted in the construction or agricultural industries but will settle into other forms of employment as opportunities arise and higher wages become available to the population (2004). As a result, the overall success of the Hispanic population as well as individuals has been dependent upon the ability to create a stable environment and assimilate into their surroundings and, ultimately, to become fluent in the English language through educational opportunities offered by surrounding educational resources (Kandel, 2004).

**Government Programs and Public Policy**

Government programs have allowed immigrant labor to be a part of agriculture production in the United States with various changes in program implementation and policy adherence (Pastor & Alva, 2004; Pena, 2009; Rochin, 1999). Through government programs in
the United States, many Hispanic immigrant laborers are allowed to work on farms and return home on a regular basis, but this number seems to be reducing as time progresses (Pena, 2009). Rochin (1999) explored these programs and discussed the implications of using Hispanic immigrant labor on farms in a study conducted to describe and report program policies of immigration and agriculture relationships. The Immigration Reform and Control Act of 1986 (IRCA) allowed amnesty for workers that had been residing in the United States since 1982 (Pastor, 2004).

Rochin (1999) stated that there were two parts to the Act: one is the Special Agriculture Worker (SAW) provision, which allowed farm workers in perishable crops the chance to legalize their current status and the second provision was for the Replenishment Agriculture Workers (RAW), which was put into effect in 1990. RAW assured that there would be an alien pool of workers available that the agriculture industry could draw on in case the workers classified under SAW were not available (Martin, 2002; Rochin, 1999). Temporary employees could also draw under the H-2A visa program, which would allow farm operations to obtain legal workers from a pool of applicants, also (Pastor, 2004; Rochin, 1999). There is also currently a H-2B visa program that allows businesses to hire and employee Hispanics from other countries in business settings, which includes crawfish processing operations, and the provisions under this program is similar to the H2A visa program with regard to application and implementation in the specified industry (Pastor, 2004).

Impact of Hispanic Immigrant Workers on Agriculture Industry

Kandel (2004) indicated that a large portion of the Hispanic immigrant population entering the country lack high school degrees, which contributes to the explanation of the large gap in poverty and the growing need for the United States to offer educational opportunities for these newcomers beyond basic education between ethnic groups. As educators enter the
industry, an important conclusion was stated that it is necessary to increase the amount of education available for the population of Hispanics and encourage improving the current educational situations in order to increase attainment and retention of minorities across the board (Gimpel, 2008). The inevitable growth of the Hispanic population across the country has been documented with a corresponding need to recognize that the population must also assimilate to a new culture in order to be successful (McKinnon & Hummer, 2006). This is an opposition to the current expectation that the Hispanic population will become accustomed to the United States as a simple result of subsequent equality as compared to the citizens who are born in the United States (Lichter & Johnson, 2009; McKinnon & Hummer, 2006).

According to McKinnon (2006), it is important that we note variables such as socioeconomic status, ethnicity, and mortality as factors that tend to correlate in relation to educational attainment. However, Hispanic immigrants tend to be concluded as an ethnic group that can persevere with a greater longevity and health system at the lower socioeconomic status when compared to other ethnic groups (McKinnon, 2006). However, many interventions can be taken by educational systems in order to increase the rate of assimilation into society through opportunities and educationally centered outreach programs into the agriculture industry (Stallones et al., 2009). Recent trends and surveys of the Hispanic population, as noted in Figure 7, have reported an overall increase in the settled number of Hispanics (immigrants) working in agriculture as opposed to the traditional migration workers noted in the past. This is correlated to the growing population-settling trend noted across the country in rural communities (McKinnon, 2006).

Hispanics tend to be able to live in a mobile society, offering many beneficial contributions to a lower socioeconomic community in terms of skills and labor (such as in agriculture production and construction) with low cost to stakeholders and policymakers
(McKinnon, 2006). Therefore, the mobile Hispanic immigrant populations have been easily observed transferring to areas where work is readily available for skilled laborers as opposed to immediate highly populated areas where employment is more competitive for the entire populations, which can result in lower socioeconomic environments for immigrants (McKinnon, 2006).

Figure 7. Hired Farmworkers by migrant as compared to immigrant label. Taken from “Findings from the agriculture resource management survey” by the USDA Department of Economic Research Service. 2008. Research Report no. 60. Washington D.C.

Observing and interacting with this growing trend, extension agents and educators must also utilize every opportunity to promote a diverse education that will not only be beneficial to the incoming and growing Hispanic population, but also the education of all groups of children. In the field of education, educators must remember that diversity in the classroom should be present in order to enrich a child’s education as opposed to hindering a potential to grow as educational consumers (Stallones et al., 2009). People who are also consumers of life-long learning in education through a social cognitive approach to educational and society-enriched
programs should ultimately include all persons in a given community (Stallones, et al., 2009).

Rochin and Pena (2009) observed and reported that there had been a trend of a growing number of hired minorities to larger farm operations as opposed to the smaller operations (1999). This included a large number of Hispanic immigrant workers as well as African American workers nationwide (Rochin, 1999). Hispanic migrant citizens continue to gain much of their income and employment through agriculture production work (see Figure 8); however, Rochin has observed a trend that the agriculture industry suffered a gradual loss of Hispanic immigrant workers to other, more lucrative job opportunities in other industries, such as the construction industry (1999). With the discussion of policy concerning migrant workers in Congress, Altman (2007) discussed the debate surrounding illegal immigrants and the role Hispanic immigrants specifically play in the economy. The policy debate concerned use of illegal Hispanic immigrants by employers in order to pay lower wages for the same jobs that United States citizens would do at a higher pay (Altman, 2007). Therefore, it was concluded by some policy makers that illegal immigrant labor also increased unemployment rates in the United States (Altman, 2007). This influences Louisiana as a large part of the agriculture industry as well as a potential consumer of immigrant labor (U.S. Census Bureau, 2005). According to the U.S. Census Bureau (Figure 9), 3.7% of the labor in Louisiana is employed in the agriculture, forestry, fishing, hunting, and mining sector; and 1.9% of the total labor force in the United States is employed in the same sector (U.S. Census Bureau, 2005).

The opposing debate expressed an opinion that these illegal migrants have been and will continue to be an essential part of society and play an important role for several larger industries, such as construction and hospitality (Altman, 2007). Altman (2007) also stated that there were many occupations that will continue to have problems employing into areas where no American
Figure 8. Poverty Rates by occupational category and gender. Taken from the “Findings from the agriculture resource management survey” by the USDA Department of Economic Research Service. 2008. Research Report no. 60. Washington D.C.

Figure 9. Distribution comparison of employment areas of all employee between Louisiana and the United States. Taken from the American community survey by the United States Census Bureau, 2005.
citizens are currently applying but are sought by immigrants; therefore, there has been an abundant supply of jobs available for U.S. citizens as well as these immigrants in lower socioeconomic positions. In 1994, Armstrong stated that the U. S. Department of Agriculture (USDA) was seeking to fill many positions with Hispanic graduates and that is still observed today in many industries; therefore, an advanced education could be beneficial to the growth and success of the Hispanic immigrant population. Jones (2005) observed that many Hispanics with higher education were, in fact, being employed in higher income jobs and this would result in an enhanced quality of life for Hispanics as a community and assimilated culture by comparing higher education with higher income earning potential.

When attempting to determine the number of Hispanic farm operators in 2006, the USDA Economic Research Service department discovered that 95.5% of operators were reported being White and 2.9% reported being of Hispanic origin. From the 2002 census survey, the Census of Agriculture began contacting farmers and found that many of the Hispanics reported themselves as being classified as White or Caucasian Americans (USDA, 2008). However, Figure 9 shows a much larger distribution of employees in the agriculture industry in Louisiana when compared to the United States. With these results, it is difficult to estimate the actual population size of Hispanic migrants currently working on crawfish farms in Louisiana; therefore, estimations must be made by experts as to the number of immigrant workers employed in a specific area.

Cuevas de Caissie (2008) indicated that without the population of Hispanic immigrants in the farming industry, the resulting loss of labor and cutback in production would greatly affect the economy. Cuevas de Caissie (2008) also noted that if the large population of Hispanics were to withdraw all funds from banks within the United States, then the economy would suffer exponentially as well as the immediate stakeholders relying on this labor resource. Cuevas de Caissie (2008) concluded that from fabrication to final sales of products, the economy would
also be negatively influenced greatly if all Hispanics left the country taking all skills, earnings, and personal belongings from the economy and society (2009). Therefore, an argument was made that migrant workers continue to play an important role in the U.S. society as well as in the development of an economic stronghold by offering lower cost skilled labor (Cuevas de Caissie, 2008).

**Hispanic Culture in Relation to the Value of Work and Education**

Education for the youth in today’s society has been reported as multifaceted upon a diverse quality education (Kalogrides, 2009). Within these confines are the limitations that must be surpassed to ensure quality of education is found for all students, regardless of ethnicity or documentation status (Kalogrides, 2009). The largest group of minorities was derived from the Hispanic population and was reported by Zalaquett (2006) that by 2025, 25% of all students will be Hispanic. Although the total number of students was reported as increasing, the dropout percentage rate for these students continuously followed with little response by educational entities that had been effective in response to this rapidly increasing number of dropouts (Abraham, 2002; Zalaquett, 2006). In fact, Zalaquett indicated that the dropout rate for Hispanic students surpassed that of any other ethnic group (2006). According to Weiher (2000), when comparing performance of Hispanic students in multiple settings, the final evidence showed that minority students: performed better in predominately white/minority schools, performed better with schools that have minority teachers present, and also performed better in school settings with multiple forms of instruction present that can best be adapted for individual student needs (Abraham, 2002).

Therefore, it is necessary to observe the surroundings of school settings and communities for these Hispanic students and adapt settings that may be best suited to assist in student learning (Weiher, 2000). When comparing Hispanic immigrant farmworker populations to other
ethnicities in the United States, it was observed that the Hispanic populations tended to have an overall lower educational attainment level (see Figure 10 and Figure 11); however, the educational gap reported between the Hispanic ethnicities and other ethnic groups in the agriculture industry is much more spread.

![Graph](image)

**Figure 10.** Educational Attainment of Hispanics in the United States. Hired Farmworkers by migrant label. Taken from the “Findings from the agriculture resource management survey” by the USDA Department of Economic Research Service. 2008. Research Report no. 60. Washington D.C.

This may be associated with the lack of assimilation among communities found within agriculture, construction, and the migrant worker population as a whole in the United States (Kologrides, 2009). Various programs have been set in place to address the changing face of education and settings for Hispanic students in urban settings, but not rural agriculture serving communities (Fry, 2002; Wentling & Waight, 2000). Work-based learning and social support programs have been in place to assist students with extracurricular activities that have assisted with increasing student motivation and learning (Bennett, 2007). There are also many instances
in which a more knowledgeable student can make more sound decisions for the public as well as his or her family in the future through diverse educational opportunities (Leal, 2004; Ryan, 2010).


Bennett noted that students overall would benefit when programs are in place that enhanced learning quality across the curriculum, with multiple individual educational opportunities offered to respondents (2007). The primary problem with traditional education, according to Bennett (2004) and Nero (2010), was the single direct education environments that school systems are using confine students inside classrooms and are not producing students that can adapt well into adult society primarily because they are not taught in diverse environments. Therefore, multiple programs must be created in order to address these issues within education
and promote student interaction in order to increase student perception of the community outside of the immediate community (Abraham, 2002; Ryan, 2010).

Work-based learning programs offer students opportunities to broaden educational objectives by learning in multiple adult-center environments, which in turn can increase a student’s knowledge base of opportunities through outreach and development (Bennet, 2004). With these programs and others in place to provide alternative educational settings, students within minority groups have been able to complete programs at a much higher rate of overall success in the educational systems than prior to work-based educational learning programs (Bennett, 2004). A social support program in education allows for students to create encouraging relationships within a school setting that can also be helpful is a support group for educational enhancement and success (Bennett, 2004). These social support programs in education have proven to be successful in reducing potential drop-out rates and increasing the overall attendance in the public school settings and were established through the social cognitive theory approach to learning in order to enhance student perception contributing to a sense of belonging in a diverse, yet assimilating society (Bennett, 2004; Stallones, 2009). Figure 11 shows that many farm workers have a low level of completed education; therefore, a response to this clientele for a greater variety of information and educational outreach would prove beneficial to respondents beyond the direct information attained, but through developing a sense of belonging and community.

The educational status and practices implemented to combat student dropouts have been a primarily focused throughout various urban areas of the United States (Waxman, Padron, & Garcia, 2006). Waxman contributed many problems of educational reform to the following factors: lack of qualified teachers, lack of appropriate or effective teaching practices, and at-risk school environments. There has been and continues to be a need for a diverse set of classroom
procedures that would assist with increasing student achievement and involvement (Fry, 2002; Ryan, 2010; Waxman, 2006).

If additional extension programs for farm workers focusing on the Hispanic populations would be implemented, Figure 12 shows that the largest percent of classes pursued by traditional crop workers are adult educational courses. Many problems in education are attributed to living in poverty and have primarily been focused in the urban areas of larger cities (Ryan, 2010).

![Percentage of crop workers participating in adult education programs](image-url)


It is much more difficult for the learning community in many rural areas to become diverse enough for students in the lower socioeconomic groups to adopt increased expectations for enhanced educational standards to achieve success (Ryan, 2010; Waxman, 2006). There should be multi-faceted programs available for Hispanic students to break away from the traditional norms and become more successful in society at a rate comparable to peers (Fry, 2002; Waxman, 2006).
In many instances, there has been a reported movement from the inner-city to the rural areas, but the students entering the rural areas did so for employment purposes and ultimately missed out on educational opportunities because families perceived working and creating an income for survival as being more important than obtaining an education (Waxman, 2006). Waxman’s study identified that bilingual education opportunities, effective practices that would offer culturally responsive instruction, cooperative learning, cognitively guided education, and technology enhanced instruction would offer program enhancements that would be beneficial to overall student learning (2006). Students that have been allowed to enroll in positive educational climates with diverse technological practices in terms of instruction as well as student guided objectives have ultimately proven much more successful than peers who have endured traditional direct teaching strategies and methods (Swortzel, 2006). These practices have not only been effective with Hispanic students’ populations, but all student populations across the nation, without to ethnic group identification (Swortzel, 2006). When students have been allowed to participate in enhanced educational studies and settings, there has also been an overall correlated increase in student performance (Swortzel, 2006).

If specified programs for Hispanics were in place, such as STEM (Science Technology Engineering and Mathematics), the population of students enrolled have a significant program of study and could achieve a sense of fulfillment and a goal set for improvement (Cole & Espinoza, 2008). Within these educational enhancement programs, with faculty and program support, there have been reported increases in retention rates through higher education after high school (Cole, 2008). These concepts in alternative programs have been centered on the idea that students can increase interest if there are career goals set and a “finish line” in place for them to succeed.

Many times, it can appear that a general traditional education has no direct benefits because of the generic curriculum in place, the program lacks he individual expectations for
achievement that have proven to be required to enhance student success. Cole stated that the immersion process involved in these programs allows lower socioeconomic and middle class students to create an alternative learning environment that would allow for multi-level learning in concepts and theoretical frameworks as well as in social context (2008). Therefore, students would be able to reach outside of the traditional community that encompasses a school setting and increase the learning awareness through building social frameworks in the context of learning and achievement. The study completed by Cole (2008) indicated that alternative and multilevel approaches to education were successful at improving the overall educational aspects measured in all areas of education as it pertains to the Hispanic populations and teaching practices. It is important to note that many alternative approaches to an educational setting as well as assessments may prove beneficial not only at successfully educating a diverse group of students, but also at the overall goal setting to achieve higher success and retention rates of students in the community (Cole, 2008).

When changes are planned and expected in an educational setting, such as the inclusion of alternative educational approaches, it requires a strong leadership to implement proposed changes in the environment. School leadership has remained and documented as the most important role in education for implementing programs designed to continually to keep students in specified programs such as retention increasing programs and social learning climate models (Mulford, 2006). The school administration and local leaders are the stakeholders that must cooperate when assisting in school success enhancement programs (Ryan, 2010). According to Mulford, the primary factors within education policy are efficiency within school systems and learning, lifelong learning and employment for graduating students, and challenges with globalization as well as the incoming diversity of students (2006). Historically, there have been multiple opportunities for students to improve themselves in the sector of education, but the
different policies implemented with little to no impact have caused much controversy in the leadership and stakeholders for environments serving the Hispanic populations (Mulford, 2006). The ideas behind the educational reform movements and policy change have been centered on developing school leadership in order to enhance overall student performance, providing a more diverse system of programs flexible for student achievement, and to prevent shortages through dropout, which would allow for student success in all education and career development areas pursued (Mulford, 2006).

With these multiple educational enhancement programs in place, the hope has been to achieve the development of a population of respondents that could contribute to a knowledgeable society with a wide range of cognitive ability that can be also be utilized in social settings (Mulford, 2006). The secondary achievement has been to enhance overall student morale and self-esteem through character building and social support programs (Mulford, 2006). However, these programs must have school leadership implementation in order to be successful (Mulford, 2006). Therefore, many consultation enhancement practices that include increasing student success must be supported by the educational administration and participating policymakers as the centered clientele with parents, teachers, and students as the labeled stakeholders for responding to the growing population of immigrant workers in the United States.

**Leadership for Immigrant Workers Migrating from Latin America**

Hispanic immigrant workers have been a part of the agriculture industry in the United States for many generations (NCFH, 2010). Where the migration of Hispanics to the United States seems like a problem to some policymakers and stakeholders, to many in the agriculture industry as well as the actual workers from Latin America share many different views and opinions (Fox & Bada, 2008). The immigration movement to the United States is a solution to end the impoverished state the Hispanics have often found themselves (Fox & Bada, 2008).
These agriculture workers come from many Latin and Central American countries, but majorities of these are known to come from Mexico because of the locale allowing an increasing ease of border crossing in relation to other countries. However, many individuals also come from Central America by crossing through Mexico into the United States.

There are differences associated with the defined immigrant and migrant population. However, many migrant workers become immigrants due to public and financial policy difficulties found with coming into the United States undocumented (Fox and Bada, 2008). Nearly one third of the workforce in Los Angeles is made up of undocumented Hispanics (indicating a failure of political public policy implementation or development) and continues to grow (Pandolt, 2008). This group could potentially become an influential political group with leadership development and communication due to the large number of members present as well as the family members who are connected as voting citizens in the United States (Pandolt, 2008).

The United States is known as a melting pot for many diverse groups, so the coined term globalization is commonly used; which indicates a political change of many countries and groups by bringing groups together for one agreeable cause (Landolt, 2008). Currently, there are many controversial sides related to the acceptance of migrant workers who are undocumented within the agriculture industry in many rural areas of the United States. The United States has witnessed many differences in opinions between many organizations related to appropriate courses of action that deal with how to develop effective action plans supporting immigrant workers properly (Pandolt, 2008). The actual governmental policy that is mandated currently centers with contextual strategies and action plans that would result in placements for the betterment of the current United States residents as opposed to visiting migrant workers (Pandolt, 2008). Therefore, policies should inherently become more centered on the populations it serves in order to develop socially stable systems and increase the support of the Hispanic immigrants.
contributing to the economy of the United States without a direct political stronghold in terms of defined individualized leadership. As Fox (2005) specifically indicated: “human rights are not equivalent to citizenship rights;” therefore, the rights of these groups should remain equal in providing appropriate care and safe working conditions that would be equal to all ethnic groups employed in the United States, regardless of documentation status. There is also a direct linkage between civic engagement and political involvement among various groups from different ethnic backgrounds; however, it is reported that the population of Hispanic immigrants have ties that enables a community with one voice with the potential to influence the political constructs to be created and developed (Ramakrishnan & Viramontes, 2010).

Some factors that could influence the success of these Hispanic serving organizations are wealth of members, efficiency in English for communication purposes outside the political groups, and social connectedness of local officials (Ramakrishnan et al., 2010). Educational centers that serve these populations should also build leadership skills that recognize and support the growth of various ethnic groups with common belief systems (Ramakrishnan et. al, 2010). Literacy among these populations was reported as a key factor in developing successful programs in the political framework that can represent the nation as a society for multiple ethnic groups of residents and adaptive to established cultural belief systems as observed in the history of the United States (Ramakrishnan & al., 2010). Although there have been many studies investigating the importance of these immigrant workers in agriculture, there have been little related to the impacts of leadership and styles of organizations promoting the betterment of living styles often found in relation to this population.

There are supportive organizational groups that promote fairness and equality among Hispanics in the agriculture industry and although great strides have been made to improve the lives of these farm workers, there are still many objectives and goals that farmworker equality
programs have to attain (Connor, Rainer, Simcox, & Thomisee, 2007). A community partnership model for social responsibility and leadership tie resources in many communities by allowing members and leaders to share in serving a common purpose by interrelating resources (Connor et al., 2007). This combining of resources among leadership has allowed groups not only to have individualized roles, but also to still serve as a group of leaders serving the community under a predetermined framework (Connor, 2007). This utilization of multiple resources has proven to be beneficial for serving at risk or underprivileged groups across all sectors, but policy has also proven to be increasingly important in the immigrant Hispanic population.

Eagly and Chin (2010) reported that there is an underrepresentation of Hispanics in leadership roles across the United States. This underrepresentation was found when comparing the actual number of Hispanics living and working in the United States as compared to the number of political leaders within the same ethnic background, and the conclusion being that all education sectors should prepare and offer to serve in the betterment of this growing community by providing leadership opportunities. This underrepresentation is also found among women in leadership roles as well, but not as a correlated comparison. Eagly and Chin (2010) noted this concept as a result of perceived discrimination as well as lack of knowledge and support bases within minority communities; however, this could be alleviated with a development of supporters in the community that identify with similar ethnic groups as well as political belief patterns. Moving toward a higher diverse leadership in communities, the context approach of leader-membership exchange would affect relationships as well as a specified organizational culture and systems of support (Eagly & Chin, 2010).

Anti-immigrant actions and behaviors have been prevalent for various different reasons across the United States; however, after September 11, 2001 there was a larger outcry by U.S.
citizens to prevent the immigration of all groups from other countries, including Central and Latin America (Pulido, 2007). The actions that should be taken by policymakers has created controversy among the Latin American community leadership as well as political entities across the United States (Pulido, 2007). Mainly this has been because of a boycott or direct negative response by the Hispanic community may lead to the beliefs that morale among migrant workers would be weakened would a movement fail to create a positive response from policymakers (Pulido, 2007).

A common need to have complete amnesty was agreed upon by immigrant Hispanic worker groups; however, there was a reported realization that it would take the entire Hispanic supporting community to take a stand and earn support from supporting communities across the United States for a plan to change immigration policy to be successful (Pulido, 2007). However, elected officials that have claimed to support the Hispanic communities would inevitably demand amnesty for workers leading to controversy in proper execution of a plan to achieve goals for future migrants (Pulido, 2007). These actions by elected officials would be a part of controversy that could be alleviated by allowing Hispanic immigrant and migrant farm workers to be a part of the election process in the United States or by leading in the educational communities (Pulido, 2007). Also, having many Hispanic (more specifically Mexican) families that contain both U.S. born citizens and undocumented workers in one family, it would be beneficial for supporting communities to develop leadership and support among political classes (Montero-Sieburth, 2007; Pulido, 2007).

Two primary organizations that have proven to be successful for persuading for a change in politics through the promotion of equality are the United Farmworkers Association and the League of United Latin American Citizens. The primary objectives and goals set by these organizations are to develop and include the creation of atmospheres in the agriculture industry
that develop better lives for migrant farmworkers in the United States. Within these organizations, there must be a leadership development that can be reliable and trusted by the Hispanic population (both documented and undocumented) in order to have followers and earn support from the community they serve.

There is an estimated three million immigrant workers in the United States that contribute to the economic success of the agriculture industry but remain an invisible at risk population due to the unresponsiveness of the community to develop a leadership group that can successfully support these workers (Connor, 2007). This situation creates a vulnerability of perceptions from followers in group leadership that may not be as prevalent in many other organizations that offer objectives for vertical movement in the social constructs. Within these constructs is the need for leaders to develop ideals and provide an environment of group conformity, which proves to be different from leadership styles where a single leader often can be a natural leader because of charisma and successful characteristics of a leader: competent, sociable, determined, and trusted by the population served as suggested by Northouse (2010).

Problems with implementation of policy was shown through media awareness of Hispanic immigrant farm worker exploitation in various parts of the United States through visible physical and financial suffering with low wages while working in the agriculture industry (because this was the reported primary source of income for undocumented workers). In addition, showing the results of using migrant labor has been at a cost of lives due to unsafe and uninformed conditions provided by many farm management organizations (Rural Migration News, 2003). However, these practices allow agriculture practices to remain lower in cost and ultimately lower costs carried to consumers in the American mainstream (Rural Migration News, 2003). Conclusions from many reports stated that migrant farm workers follow in a primary
work group, but with the failure of individualized leadership, these groups will remain in the same poverty stricken conditions (Conover, 1987).

The League of United Latin American Citizens as well as other groups similar that developed in metropolitan areas across the United States in 2006-2007 organized one historical movement for migrant workers. This movement attracted a march for immigrant rights across the United States that proved to be one of the largest rallies for Hispanic immigrant rights in recent history, but failed to name any individualized leaders in this movement. Societies supporting Hispanic migrant workers have fought to maintain the rights of these workers to be treated equally, while the opposing view supports more strict policies for tracking and verifying Hispanic workers right to work in the United States through proper channels and documentation. Landolt (2008) indicated that there is an association between immigrant organizations in political and actual sectors of civil societies that act on the behalf of immigrant workers. The concept developed was a key to building relationships between groups of immigrant organizations and political parties without the labeling of individuals as leaders that may be perceived as “rebellious revolutionaries” in these support groups (Landolt, 2008).

Once a leader was traditionally established in many of the smaller Hispanic immigrant farm worker groups (usually more through seniority and experience than charisma), Conover (1987) reported that decisions were made by the leader and followers do not question the choices made. This process could prove to reduce group morale if decisions are not proved financially or physically positive for the involved group (Conover, 1987). Another concern that may prevent the emergence of individualized leadership is the absence of migration networks among multiple migrant Hispanic farm worker groups, preventing proper communication channels between groups (Landolt, 2008).
However, group collective struggles and movements were reported as beneficial at developing change for all involved; it is important to have individuals to lean on in order to prevent confusion and to guide the group in achieving a single goal (Fox, 2005). Because each individual may have his or her own ideas for how to achieve the same goal, the individual acts could be counterproductive to the group objectives or be deemed as aggressive by policy makers and stakeholders in the public industry and media (Fox, 2005). Fox also indicates that many naturalization decisions in the United States have originated from an idea that Hispanics are permanent foreigners, even though many generations may reside in the United States for subsequent years and generations, developing “anchor baby” situations (2005).

Cesar Chavez was a single example of a charismatic individualized leader and pioneer who formed the National Farm Workers of America organization (NFWA) and was successful as an initial leader with the ability to create groups. However, the continued development of this organization has initially grown into the United Farm Workers Organization as a primary developmental leading group within Hispanic farm workers. Therefore, it is observed that although a single leader may begin an organization, it must be followers who continue carrying the implementations of group plans for success through civic engagement to be achieved (Northouse, 2010).

According to Fox and Bada (2009), civic engagement recently became a big part of immigrant political influences across the United States. Fox stated that it is important for leadership members in the Hispanic immigrant population as a group to be led in this civic outreaching and as a group of individualized Central and Latin American migrants with one voice in order to become more active and successful in political roles (2009). Evidence also showed that binationality played an important role in the lives of these immigrants by enabling them to take part in civil outreaches based in their home countries (Fox, 2009). This “civic
binationality” has been important for Central and Latin Americans who have based interest in both countries (United States and home countries) and are part of the communities in the United States as well as the home countries of citizenship (Fox, 2009).

Much research in sociology, especially related to Mexican immigrant workers, has indicated that immigrants as well as migrant farm workers remain actively engaged and interested in the politics of their home countries (Fox, 2009). In addition, correlations in many studies have shown activity among Mexican citizens in the United States (depending on locale) would also have active civic engagement in Mexico elections if engagement were made possible by community leadership groups and organizations (Fox, 2009).

With 2006 reporting a dramatic increase in civil engagement in the United States, there is evidence that leadership in Hispanic immigrant farm worker populations is emerging; however, individuals in these communities are not as forthcoming as leaders in traditional civil elections. Therefore, it seems as though leadership in migrant/immigrant communities from Central and Latin America has proven to be successful in cooperative groups with similar objectives, but rarely has a single personal image been correlated with successful leadership groups in recent migrant farm worker history (Fox, 2009).

Because informal leagues for rights of immigrants have either failed or resulted in publicized riots, leadership has become more dispersed and not centered for serving the Hispanic immigrant agriculture laboring populations (Ramakrishnan, 2010). Therefore, the group leadership, according to Ramakrishnan (2010), may contain a small number of members but will have a big following of anonymous members. These leadership organizations are known as HTA’s (hometown associations) (Fox, 2009). HTA organizations have spent large amounts of time organizing absentee elections and voting processes for home countries (Fox, 2009). HTA’s can be influential and support undocumented Hispanic workers even with a lack of resources that
many organized groups may have at their disposal (Ramakrishnan, 2010). One of the main advantages and causes of success for HTA’s (according to Ramakrishnan) is the ability to serve undocumented Hispanics while providing anonymity to the clients served (2010).

HTA’s are located in large metropolitan areas across the United States and offer support for Hispanic immigration rights and civic nationality rights to vote. The primary HTA groups focus on remaining focused on Mexican citizens residing in the United States (Fox, 2009). Leadership in HTA’s tend to be mostly men, but may contain a diverse leadership group (from women to young adults) depending on the specific cause of the individual HTA, but the direct leadership is not consistent for all events or causes (Ramakrishnan, 2010). A more recent objective for HTA’s has been the improvement and collection of naturalization processes for the permanent resident in the United States. The success of these programs was found and verified as a measured positive outcome if the policies implemented provided an atmosphere that welcomed a diverse group without discriminating because of perceived language or education barriers often found in political organization atmospheres across the United States (Ramakrishnan, 2010). According to Fox and Bada (2008), the rural civilizations of Hispanics can remain strongly connected in their home countries through the utilization of HTA’s that have leadership and implementation of ties from the United States to the countries of origin. This program implementation also serves a purpose that has allowed Hispanic immigrants to remain politically connected or active in their hometowns, with the hopes of eventually returning (Ramakrishnan, 2010).

In addition, many current residents in rural Mexico have the intent or expect to migrate into the United States in the future to pursue a better life for their families; therefore, organizations that allow political ties and leadership practices for these people can assist in making transitions easier for future generations (Fox, 2008). However, potential causes for
lack of labeled individualized leadership and the continual group containment with one collectible objective may be:

1. Fear of individuals for being deported or arrested by local governments.
2. Indirectly affecting family income by losing income resources by acting rebellious in the local community.
3. Preventing future abilities to move ahead as an individual within a group as a result of standing out.

The primary influences of Hispanic immigrant workers could have on the U.S. workforce would be within the agriculture industry and subsequent economy by voluntarily stopping labor and halting production as a collective and collaborative group, which would drastically affect the availability of produce and related materials to the United States (Fox, 2008). However, very little has change to increase the rights and better work conditions for this population (Fox, 2008). Ted Conover (1987) spent time in the company of many immigrant workers from Mexico in the 1980’s and although some time has passed and policies have been implemented since that time, the lifestyles reported and observed still hold true today in terms of cultural practices and motivations from the views of these migrant workers. Conover (1987) reported that Hispanic immigrant workers who work utilizing social security cards issued under false identities pay into the social security system, but never receive benefits. This contradicts the claims and opposing argument that undocumented workers take benefits from the United States without paying into the system. Also, the lower waged labor in the agricultural production systems provides a means to offer continual products at a much lower cost to consumers than if labor were to be strictly based on the current U.S. minimum wage system (Conover, 1987).

The main leadership cause that has developed and guided leadership organizations for migrant and immigrant Hispanics in the United States has primarily been grouped ethnicity and
the more common challenges associated with having home countries relatively close to the current residences (Fox, 2008; Ramakrishnan, 2010; & Landolt, 2008). In addition, many migrant/immigrant Hispanic persons in the United States continually have ties back to their home countries, resulting in a desire to focus continually on political aspects of their home countries (Ramakrishnan, 2010). There is a need for current leaders of all ethnic groups to help provide many groups with rights that are available to all residents in the United States regardless of documentation status.

Because the overwhelming population of Hispanics currently residing in the United States are often underserved because of a lack of leadership found by individuals in communities, but leadership can serve as a strong instrument for bringing together large groups for common goals in societies (Fox, 2008; Landolt, 2008). As individuals, immigrant workers who are undocumented have a lot to lose for standing up for their own rights, and many permanent resident citizens in the United States are often uneducated to local politics (Pandolt, 2008). Therefore, educators and outreach community based organizations should serve as information resources that would allow communities and individuals to become leaders in developing a stronger nation based support group (Pandolt, 2008). There should be also an intermingling of multiple diverse ethnic and gender groups found within a society sharing equal beliefs that hold up leaders in specific roles. Leadership is being confined to immigrant social groups rather than individual leaders or activists from the Hispanic community, or individuals are citizens of the United States acting as activists, but not identical to the populations to whom they intend to serve (Pandolt, 2008).

In agriculture, human labor has continually been a key resource for the successful implementation of practices that provide safe products to America (Jenkins, 1991). However, farms must employ economic practices that are sustainable in order to remain profitable,
resulting in the use of immigrant Hispanic labor (undocumented and documented) to continually implement low cost production; however, the source of income as well as precise population numbers for a majority of these immigrants is actually unknown (Cuevas de Caissie, 2008). However, Hispanic migrant workers in government-supported programs can earn an income considerably higher compared to wages that would be earned through other means in their countries of origin (Cuevas de Caissie, 2008). In addition, the employment opportunities provided by these government programs allow Hispanic migrant workers to work toward a greater goal: an improvement in the quality of life for their children by providing the financial means to obtain a meaningful educational background (Cuevas de Caissie, 2008). Cuevas de Caissie (2008) stated that without the population of Hispanics in the farming industry, the resulted subsequent loss of labor and cutback in production would negatively affect the economy. Cuevas de Caissie (2008) also noted that if the large population of Hispanics were to withdraw all funds from banks within the United States, then the economy would suffer as well.

Nickols, et al. (2009) stated that the continual growth of minority groups (including Hispanics) should also have an educational as well as overall community serving response objectively responding to this changing diverse population in order to enhance the social constructs that will eventually shape the lives of future generations. Researchers should develop plans of practice that would enhance cooperation of multiple ethnic groups to practice leadership roles within communities as well as encourage community involvement (Chesney, 1992; Nichols, 2009). The growing population in agriculture should implement the educational training and support for diverse groups of people across a variety of backgrounds in order to continue the equality of education in the United States successfully (Chesney, 1992). A leadership implementation plan would not only benefit those Hispanic immigrants currently in the United States, but also would help the entire country support a growing diverse educational
and politically responsive community (Jenkins, 1991). One method for increasing the rate of success for the growing population is through literacy campaigns specifically designed to serve the current and future populations of Hispanic immigrant farm workers and migrants entering the United States as opposed to ignoring the needs of these groups (Gutierrez, 2008). If a learning society can be shaped to enhance values of teaching and learning in order to embrace the younger generations as well as eventual citizens of Hispanic immigrant farm workers and migrants, then a result would be an influential group that would be also literate and educated members of society (Gutierrez, 2008).

Gutierrez (2008) stated that the U.S. educational system should welcome the opportunities to educate as well as increase the success rates of the Hispanic immigrants and migrant farm workers in order to develop a more socially constructed framework for future generations. With practices implemented and objectives set by educational groups, leadership development and followers of political policy and practical implications could provide a stable structure for all stakeholders within the agricultural industry (Gutierrez, 2008). Although the United States is seemingly becoming a more diverse nation, the individuals who have common beliefs and leadership values should be encouraged to share these common objective goals in order to develop prosperous communities and implement change among migrant and immigrant communities (Gutierrez, 2008). Leadership and education should center beliefs from developed agendas that serve the entire population equally and support future political leaders to create an equality of ethnic voices and members within the social constructs of society (Fox, 2008).

**Parental Involvement in Education and the Community**

Some drawbacks do exist within the community in the United States and education when Hispanic immigrants attempt to maintain their own cultures while assimilating into the educational system in the United States (Ayon & Aisenberg, 2010; Ryan, 2010; Saracho, 2007).
Gaetano (2007) indicated that there are culture differences in the United States that may result in parents of Hispanic children feeling apprehension to be involved where traditional school settings are more prevalent. As a result, school settings have reportedly perceive Hispanic parents as uncaring when it comes to children education due to lack of communication (Ayon, 2010; Gaetano, 2007). Many factors may contribute to this low rate of parental activity in school settings, especially in agriculture related communities (Gaetano, 2007). Some reasons for lack of parental involvement include mistrust in school administration as well as language barriers that often exist between parents and school settings (Gaetano, 2007). In addition, many Hispanic parents utilize authoritarian practices in order to teach children lessons and for punishment methods, which can lead to reported abuse and neglect from the school systems in the United States (Ayon, 2010).

This problem tends to grow the mistrust and problems with the language barrier constructs present in the U.S.’ school systems (Ayon, 2010; Ryan, 2010). However, studies have shown that there is a greater tie of family importance and presentation of family character among Hispanic families and this is actually observed with a greater reported correlation when compared to many other ethnic groups (Ayon, 2010; Kalogrides, 2009).

There have also been some perceptions between the Hispanic community and discrimination, which, according to Cardarelli, Cardarelli, and Chiapa (2007), can lead to negative impacts related to unhealthy school and family interaction. Carderelli (2007) indicated that negative health impact consequences have been prevalent through complex interactions among the Hispanic community and the negative experiences throughout life. Although the health effects may not be obvious to educators, the mental instability that could contribute to a poor quality of life can also affect the education received by Hispanic children (Carderelli, 2007). Therefore, it is imperative for educational programs to be provided as well as educational
outreach opportunities attempted to involve Hispanic adults that are migrating into areas that may provide educational opportunities for support.

Many Hispanic immigrant family structures provide students with environments beneficial to their education, but these beliefs are related to parent’s backgrounds and experiences in the educational environments in which they were raised (Ayon, 2010; Saracho, 2007). There are educational practices in place that allow for alternative means of educational material enhancement that can benefit a diverse group of students and enhance the overall quality of education received; however, educational systems should attempt to involve students as individuals as opposed to generalized groups (Solorzano, 2008).

If a comfort level is found within the community setting, educational opportunities as well as adult education through extension could result as a widely accepted source of educational information accepted by all stakeholders and policy makers (Farner et al., 2005; Saracho, 2007; Solorzano, 2008).

With the alternative educational programs available, there are still the problems associated with education for Hispanics students that may need to overcome language and perceived cultural barriers (Solorzano, 2008). Solorzano reported that one primary perceived culturally biased aspect of education has been associated objectively with standardized testing in school systems (2008). The problems associated standardized testing and being educated with alternative learning styles and socialization skills come into play when paper based testing actually assesses student performance (Solorzano, 2008). Solorzano (2008) discussed the main problems that can be associated with second language English learners and standardized testing that assesses performance. These standardized tests should not measure reading ability, but many times that has been the consequence from English as a second language learner (Abraham, 2002; Solorzano, 2008). With this educational barrier being primary in school settings, it proves
much more difficult to earn the trust of Hispanic parents through extension and education due to the experiences faced by the children in the educational systems and the tendency of school experiences to be perceived negative when compared to Hispanic family societal standards (Fry, 2002; Gonyea, 2010; Solorzano, 2008). If students do not achieve at a certain level, the test is used as a criterion-referenced test and students may not be allowed to continue in education if they do not successfully achieve scores on this paper-based test set by policy-makers beliefs of educational objectives (Solorzano, 2008).

Furthermore, if students were accustomed to community based learning styles found in many ESL (English as a second language) and have been assessed with alternative methods, they may not be able to succeed as well on paper based assessments due to testing inability as opposed to lack of basic knowledge skills reporting (Solorzano, 2008). These types of learning systems are found throughout community based extension services and allow adults to achieve and learn through alternative activities as opposed to traditional school methods (Chapa, 2006). There is a need to assist stakeholders in making the correct choices that are best for the school system as well as the best educational practices for a school system in order to achieve well rounded successful objectives in a school system (Farner et al., 2005). This is especially important for the education of Hispanic immigrant farm employees and their children who have become assimilated into the environment (Farner et al., 2005; Gonyea, 2010).

Not only do mainstream high school students have a stake in education, but also students who will enter the workforce or proceed into higher education and their parents who have different aspirations for their children to succeed (Goldenburg, Gallimore, Reese, & Garnier, 2001). One of those potential educational sectors as an educational and eventual career stepping stone is community college (O’Connor, 2009). Many times, there are Hispanics who want to pursue an education, but are too old for high school and the fact that many states do not allow
four-year institutions to accept undocumented residents (Gaetano, 2007; Goldenburg, 2001). The community college also offers many benefits of education without the expense of a university (O’Connor, 2009). There is a reported overrepresentation of Hispanics in community colleges, which shows evidence that education is perceived as important but may not be as easily accessible to the Hispanic population as it is for other ethnic groups in terms of four-year universities (O’Connor, 2009).

Research has also indicated that Hispanics have a higher disadvantage in four-year universities than other students (O’Connor, 2009). There is a less likelihood that students of Hispanic origin will complete their education with a bachelor’s degree or higher, even if they are well educated in a school system (O’Connor, 2009). Several factors, according to O’Connor, play a role in student’s inability to achieve according to educational standards set by governing school system administration, but the socioeconomic status plays an important role when referring to the University achievement (2009). Many farm employees have indicated a primary reason for entering the United States as to come in search of better wages subsequently find themselves in a lower socioeconomic status level environmental setting. Many students need to work to help support families and cannot afford to spend the time in a full time university program, therefore, the students ultimately fail to complete a program and ultimately drop out or fall back to a community college that offers flexible scheduling (O’Connor, 2009). There is also the increasing rate for all students across the board to use community college as a stepping-stone to a four-year university, but Hispanics fail to make that transition in many cases (O’Connor, 2009). This may be due to main outside influences associated with family or new members of the community coming into the area and needing assistance by current residents (O’Connor, 2009).
Maldanodo (2006) stated that even though Hispanic high school students may not complete education at a higher level, they do tend to maintain employment in one or more sectors at a higher rate than other ethnic groups, in many farm operations, working with the family in the operation while attending school has proven commonplace. The primary barriers faced by Hispanics in the workplace are the language and documentation status standards set in place for them, otherwise, Hispanic immigrant farm worker populations tend to make a large contribution to the economy and labor force in the United States (Maldonado, 2006). Maldonado (2006) reported also an overall concern prevalent in the United States with regard to potential farm and construction worker shortages in the United States as a reason to continually allow these workers to be present; however, these Hispanic populations should also have equally opportunities for educational advancement as their counterparts in society (Maldonado, 2006). In education and agriculture extension, there is the potential to improve the overall quality of life for Hispanics through education and training that will allow them to improve the economic conditions for themselves and their families. This objective can be achieved regardless of location and can help Hispanic immigrants contribute to society in both economic standards as well as educational community diversity at a rate that is representative of the populations without fear of discrimination by society.

Studies have indicated education as being highly supported and respected by parents of Hispanic students and youth; however, the need for an income in order to survive prevents Hispanic family members from obtaining a higher education (Community College or University) or allowing children to do so as well in many cases (Hurtado-Ortiz & Gauvain, 2007; Maldonado, 2006). Therefore, the improvement needed in educational achievement may be hindered by the inability to obtain high enough paying jobs that will support families and allow them to be more successful in the pursuit of educational and career goals (Maldonado, 2006).
While observing and making recommendations in the sector of education, it is imperative to include a diversity of student achievement and encourage families encountered to pursue higher educational values (Gonya, 2010).

However, many families may see this impossible as the cost of education continues to rise and the job market pay continues to remain the same (Saracho, 2007). Hispanic students, according to Valencia and Johnson, also have higher aspirations for educational attainment than what is reportedly perceived by Caucasian American citizen counterparts (2006). However, the burden of acculturation and family support often will fall on the shoulders of younger generations (Hurtado-Ortiz & Gauvain, 2007). Valencia defined acculturation as the process of adapting to a culture as well as accepting those changes in terms of values and behaviors (2006). Valencia and Gonyea (2010) indicated that students who are able to accept the values of their new environment and assimilate tend to fare better in educational attainment and achieve higher levels of employment and educational success better or at the same rate as their counterparts who may hold to the family values of traditional Hispanic lifestyles (2006).

Valencia (2006) stated that among barriers mentioned by students who have been accustomed and fluent in usage of the English language, discrimination due to ethnicity was still a reportedly common factor felt by Hispanic students in all educational settings. Perceived discrimination can often make students feel ostracized from the surrounding environment, resulting in a withdrawal away from public settings and back to the family (Hurtado-Ortiz & Gauvin, 2007). With this being a common perceived threat in the Hispanic youth community, students may have difficulty assimilating into the educational environment that can prove beneficial to the family structure and for increasing assimilation rates for Hispanic immigrants in the United States.
Perceived economical and educational barriers have primarily been reported from students with Hispanic backgrounds and their parents; however, McWhirter (2007) assessed perceptions of both Hispanic and their white counterparts with regard to post-secondary educational planning (Rodriguez-Brown, Li, & Albom, 1999). Reported results from the studies indicated that “white” (Caucasian U.S. citizen) students felt much more confident that there would be no barriers in completing an education and being successful in any postsecondary career path chosen (McWhirter, 2007). Hispanic student counterparts in the study stated that an overall perception in the community was felt that there would be many barriers and were unsure of their ability to complete many postsecondary school options (McWhirter, 2007; Rodriguez-Brown, 1999). These vast differences between self-perceptions and expected aspirations for success may count for many of the failures and incompletion in education observed in postsecondary schools (Rodriguez-Brown, 1999). It is imperative for educators and stakeholders to recognize this perception found in many Hispanic youths and develop programs that will combat this perception and promote success in educational settings throughout the United States (Maldonado, 2006; McWhirter, 2007).

With the growing population and diversity in education, if educators fail to overcome the cultured biases and self-perception of discrimination in education, the educational system may fail to achieve in reaching potentially successful students without concerns related to documentation status and; instead, create lifelong respectable learners as a common community (Alon & Tienda, 2007). Due to this sociological bias, many controversial debates have been rekindled related to documentation status and offering equal education to undocumented students in public education and in proper methods for assessing student achievement (Alon, 2007). Alon indicated that using high school grades of students not only is measuring cognitive ability but also ambition (2007). These measurements are also related to potential work habits and higher
educational success (Alon, 2007). However, many studies, such as Maldonado (2006) tend to disagree with this statement in terms of Hispanic education for many reasons. Attendance is a primary factor that can affect grades, and studies reportedly tend to report that many absences in Hispanic families due to the need for youths to play important roles in the family structure such as employment or household care is commonplace, but atypical for many other ethnic groups (Fry, 2002; Hurtado-Ortiz & Gauvin, 2007).

**Hispanics in Higher Education and Trends Associated**

Studying specifically higher education tends to be much more difficult in terms of four-year universities and correlating actual objective measurements for determining success without previous aspirational standards (Hurtado, Carter, & Spuler, 1996). In many populations, living independence for students of many ethnicities occurs at the age when students enter higher educational settings; however, many Hispanic families still rely on the youths for an income, which results in students living closer to home for educational opportunities (Fry, 2002; Hurtado, 1996). Chapa, De La Rosa (2006), and Fry (2002) concluded that many Hispanic students are present who enroll in many community colleges or four-year university programs but fail to graduate. Chapa specified further that projections are hopeful if assimilation continually occurs for Hispanic students who continue in multigenerational families and will subsequently gain the support for individuality within the family based community (2006).

Although there are indications of increased total enrollment in sciences and engineering by Hispanics in the United States, the projected growth for Caucasian U.S. citizen peers in the same areas is still at a much higher percentage by comparison (Chapa, 2006). Chapa (2006) also stated that in higher education, Hispanics tend to be vastly underrepresented as higher education increases by degree level (Goldenburg, 2001). Chapa defined the loss of this Hispanic population of students in education as a leak in the educational mainstream pipeline; but that the
answer lies somewhere in the youth and the ability to counsel and support these students and their families through high school and further into the higher educational sectors (2006). These reported ideas and standards in higher education have also reported that there is a large discrepancy in total higher educational numbers due to the large number of Hispanic students enrolled in community colleges that their Caucasian (white) counterparts never become a part (Arbona & Nora, 2007).

When reporting numbers of students enrolled in multifaceted higher educational settings, Hispanics in community colleges may be overlooked or counted incorrectly due to the large number of students that are expected to continue through into a four-year university, but fail to do so for various labeled factors (Arbona, 2007; Gonya, 2010; Hurtado, 1996). Arbona concluded that individual Hispanic students who begin in a four-year university are equally as likely to complete a bachelor’s degree as a student who obtains an associate’s degree from a community college (2007). Therefore, educational settings and programs should be developed and objectives should be set in place that would enhance student participation at the higher education level, but many current drawbacks are reported as related to location and the need for Hispanic youths to remain in the proximity of the family unit (Fry, 2002; Gonya, 2010). Fry and Gonya (2010) also indicated that many Hispanic students do not initially enroll in universities because they do not want to be separated from their families or cannot do so because of lack of financial stability (2002).

This reported family bond was reported and assessed through many studies in Hispanic education and perceived need to enhance educational achievement in urban settings as well as rural areas where Hispanics are seemingly migrating. This observation not only creates cause for a need to increase educational standards and expectations in traditional school settings, but also
alternative educational settings such as agricultural extension programs that reach out to these students in order to enhance educational aspirations and support parents of the Hispanic youth.

Cuevas de Caissie (2008) observed and recorded Hispanic viewpoints as related to the Hispanic culture and the struggles that Hispanic families face in order to gain a better life through employment and educational opportunities available. Many of these families were reported as coming to the United States in order to work initially in the agriculture industry with hopes to obtain a more stable life economically in the future (Cuevas de Caissie, 2008). Fisher (2004) stated that many migrant farm workers would travel around the country with the harvest seasons; therefore, the unsteady lifestyle of these farm workers can hinder the education of the children as a result of traveling with these families. However, over 50% of Hispanic farm workers are now classified as settled immigrants (Fisher, 2004). In Louisiana crawfish farm operations, the workers tend to be initial migrants who strictly come from their country of origin and return home after the season or remain on the farm for an extended amount of time (becoming immigrants), depending on the labor demand in the area during a particular time of year.

Unfortunately, Fisher also stated that there is very little research related to the behavior or educational effects as a result of this traveling agriculture commodity season dependent lifestyle (2004). Fisher’s study revolved around stated objectives using community technology centers in order to determine what role information seeking plays in the lives of immigrant Hispanic farm workers, what the information grounds for these workers and their families are, and what media is used to share information with others in the Hispanic community (2004). Results from Fisher’s study showed that Hispanic immigrants would access these centers for four primary reasons: to teach their families, communicate with home, translate phrases, and to help their children with homework (as an indication of perceived educational importance) (2004).
This also provided evidence that the Hispanic families that did come to America will seek to educate better themselves with technology that is currently available. Therefore, education seems to be a concern for Hispanic migrants residing in the United States. A primary difficulties identified by Fisher in many research studies are: the identification of these vulnerable populations and obtaining information from these community members because of legal pressures, defined vulnerability, and the shared suspicions surrounding anyone questioning them that is not within a trusted system or known community (2004).

Cuevas de Caissie interviewed Hispanic immigrants in order to gain a better understand some of their journeys and the aspirations that these immigrants had when deciding to come to the United States. Most Hispanic immigrants wanted to come to the United States for better educational opportunities for their children (Cuevas de Caissie, 2008; Fisher, 2004). One man that Cuevas de Caissie interviewed owned a home and his own land in Mexico, but still illegally crossed into the United States because there were many jobs available that Americans were not willing to do (2008). With this idea, he planned to work and send money to his family in his home country with the goal to set up a new business in Mexico and not remain in the United States for an extended period of time (Cuevas de Caissie, 2008). This was a plan to benefit the family and provide for better opportunities for his children to obtain an education without worrying about financial stability (Cuevas de Caissie, 2008). Another family interviewed by Cuevas de Caissie was from Guatemala and came to the United States seeking political asylum (Cuevas de Caissie, 2008). The family was wealthy and therefore sent their children to the United States for an education (Cuevas de Caissie, 2008). Cuevas de Caissie claimed that these children would lose their cultural identities because of the lack of immigration from Guatemala (2008). These two examples of immigration imply that obtaining an education for their children is an important goal for Hispanic migrants. Heise (2002) composed a set of material that
demonstrates the multiple contributions that Hispanic Americans have provided in order to pave the way for the future. Heise noted the multiple contributions to science as well as literature in a compilation that demonstrates the need and necessity for higher education to be provided to the Hispanic culture (2002).

According to Warrix, the family unit is the single most important social unit within the Hispanic culture (1995). There is a large gender difference and male dominance seen in the Mexican-American culture (Warrix, 1995). This may be one reason why a majority of Hispanic immigrants who work in the agriculture industry are males. Like traditional America, Hispanic culture is reported as having the father as the head of household and mother as a household caretaker (Ayon, 2010). Also like traditional America, this trend has been changing for some time to have more equality throughout the household by observing the mother as an additional worker in society that economically supports the family structure (Ayon, 2010; Warrix, 1995).

According to Census Bureau projections, by 2050, the Hispanic population will be 25% of the American population (MacDonald, 2006). Currently, despite the strong family support, Hispanics now dominate the free food program and has reportedly grown 25% from the year 1996 through 2002 (MacDonald, 2006). MacDonald also concluded that even though many of the documented Hispanic population relies on a welfare system to survive, a large percentage of young adults work regular jobs, but at very low income wages; therefore, they are approved for these government programs because of the work done for minimum wages (2006).

These studies combined show that a majority of the Hispanic immigrants work in the agriculture industry, but earn wages low enough to be eligible for the welfare system if they or their children are registered American residents. This is one reported reason that many Hispanic immigrants may have trouble in the pursuit to obtain the self-reported goal of a better life, leading to a better education and economic stability for their children. Therefore, educational
programs and public policy would assist in achieving this family aspiration by allowing the Hispanic population more opportunities to earn an education as well as a subsequent monetary increase for the family to assimilate more rapidly into mainstream society.

**Data Collection from Vulnerable Populations**

Many methods for the collection of data have been used to obtain data from vulnerable populations, with ethnic classifications showing Hispanics as 46% of identified health research studies reaching out to labeled and identified vulnerable populations (UyBico, Pavel, & Gross, 2007). UyBico (2007) indicated that community outreach methodology was the most successful in recruiting respondents, whereas social networking resulted in no difference when compared to traditional mailing and referrals for respondents. However, the most frequently used intervention for gathering research data was direct approach by healthcare professionals, which is the same method implemented by the researcher for this study (OyBico, 2007). Dillman, Reips, and Matzat (2010) report that internet survey methods are increasing in number of use because of research ease; however, many households may not use the internet on a regular basis and may result in a bias sample from the population. In addition, many vulnerable populations may not have access to the Internet, thus reducing the overall number of responses that the researcher may receive. Another method to increase participation is to switch methods of data collection through telephone contact as well as mail surveys and follow up contacts (Dillman, et al., 2008).

However, a researcher utilizing mixed methods may receive inconsistent answers to the same question by the same participant if the mode for which data is collected is changed; also, allowing the participant to decide the method for responding does not significantly increase the response rate by respondents (Dillman et al., 2008). However, interaction and personal data collection of a randomly selected group of individuals as a target sample may prove to be the best method for obtaining the largest sample for a population, although it may also prove to be
the most costly (Dillman et al., 2008). This may also be the case where mail surveys to vulnerable or hard-to-reach populations may also prove to be unsuccessful, mainly because large groups of workers may not receive regular mail or may not respond truthfully due to the many channels the surveys may have to flow through in order to be collected by the researcher.

According to OyBico (2007), methods utilizing payments or rewards for participating in a research study may actually decrease trust and reduce response rates, especially in populations already deemed as vulnerable due to mistrust in research. Methods used in Latin American countries reported that face-to-face interaction with questionnaires that remained anonymous proved to give the most accurate information when asking a vulnerable population about private information (Soto et al., 2007). Also, populations that are difficult to reach, such as the southeast region of the United States, have been labeled as vulnerable because of the often documentation status and the migration pattern of work that seems to follow these Hispanic immigrant workers in agriculture (Parrado, McQuiston, & Flippen, 2005). However, Parrado et al., indicated that community based research seems to provide researcher with the best response rates (2005).

In community based data collection, questionnaires are provided to groups through targeted random sampling and obtaining information from these groups at the same time would provide more reliable information about this population (Parrado et al., 2005). However, difficulties associated with obtaining data from Hispanic immigrants is a result of the unavailable existing representative base sampling frame that many populations currently have for researchers to draw (Parrado et al., 2005). Therefore, randomized population sampling must take place from known data resources as well as through background knowledge of these populations through community involvement (Parrado et al, 2005).

In the design of specific questionnaires for Hispanic immigrant response, it is important to ensure questions are direct and are not be misinterpreted by the participant through techniques
of pilot testing and sampling instruments (Berrigan, Forsythe, Helba, Levin, Norberg, & Willis, 2010). Although many problems through qualitative data collection have been found because of misinterpretations by the interviewer, many research questions and pursuits need to continue in order to reach this vulnerable population of individuals through objective means in order to have a baseline for building informational programs through future qualitative methods (Berrigan et al., 2010). A base standardized list of survey questions were administered to this vulnerable population that proved to illicit accurate and reliable information (Berrigan et al., 2010).

However, the study concluded that the more time the interviewee had been in the United States, the more accurate the response obtained through open ended questioning or qualitative methods became, indicating a higher acculturation rate correlating to the responses received by the researcher (Berrigan et al., 2010). It is identified that Hispanic immigrants also do not readily respond to mail and telephone surveys due to mistrust or vulnerability of resources; however, direct contact of populations in communities often proved much more successful (O’Hegarty et al., 2010). O’Hegarty et al. (2010) also indicated that the target populations should be accessible as well as survey instrument design be straightforward in order to allow for completion by initial respondents. Personal contact also allows for higher rapport between researcher and respondents, increasing the participation rates among respondents (O’Hegarty et al., 2010). Another method to collect accurate and data that is reliable recommended by Frohlich and Potvin (2008) is to incorporate data collection into the everyday lives of the respondents. This method allows for a complimentary approach to the community population method of collecting data from vulnerable populations (Frohlich & Potvin, 2008).

**Hispanic Immigrants as a Vulnerable Population**

Many Hispanic immigrant workers who come from other countries in order to work in agriculture are classified as vulnerable because they are often present in the United States
undocumented (or unknown documentation status), which has been deemed as one of the most
dangerous occupations in the United States (Breeding, Harley, Rogers, & Crystal, 2005;
Mazonni et al., 2007). Hispanic immigrants are also identified as vulnerable because they are:
often undocumented, have low education levels, low wages, do not have health insurance, are
susceptible to human rights violations, and are often migrating without families or contact with
the family structure (which is deemed as highly important in the Hispanic culture) (Kissinger,
Liddon, Schmidt, Curtin, Salinas, & Narvaez, 2008).

Research reported from Stallones et al., (2009) reported that some Hispanic immigrant
workers might come to work in the agriculture industry before they obtain a formal education or
complete high school in their home countries, tending to leave them as uneducated workers in
the agriculture industry. This may tend to ensure the labeling of the population as vulnerable
through lack of knowledge or with a limited ability to read documents or understand safety
precautions in the agriculture industry (Stallones et al., 2009). This limited knowledge may also
create an unsafe atmosphere in agriculture production operations, which is also deemed as one of
the most hazardous occupations in the United States (Villarejo, McCurdy, Bade, Samuels,
Lighthall, & Williams, 2010). In addition, Villarejo et al. (2010) indicated that immigrant
workers with less than 10 years of employment in the agriculture industry were less likely to be
documented, which would also correlate to being more receptive to mainstream educational and
extension programs if offered to this population by educators and stakeholders tied to the
industry.

Vulnerability is also found in many Hispanic immigrant farm workers as a result of
related depression and lack a regular food resources (food insecurity), which also is influenced
by the inability to communicate with families or the uncertainty of when family or local
community contact will occur in the future (Mazzoni, Boiko, Katon, & Russo, 2007). In some
cases, the fear of being deported due to documentation status is also a contributing factor to the vulnerability label (Mazzoni, Boiko, Katon, & Russo, 2007; Weigel, Armijos, Hall, Ramirex, & Orozco, 2007). These multiple variables can combine to create an atmosphere of mistrust and may lend Hispanic immigrants more difficult to access by educators or researchers (Mazzoni, Boiko, Katon, & Russo, 2007; Weigel, Armijos, Hall, Ramirex, & Orozco, 2007).

Kissinger et al. (2008) studied Hispanic immigrants in New Orleans post Hurricane Katrina and indicated that 93% were undocumented and deemed vulnerable in the specific study. In order to collect data, Kissinger et al., provided anonymous and confidential sampling of the population, but also collected data based on a preset venue location where Hispanic immigrants would be available (2008). The researchers indicated that because this population is deemed “hard-to-reach,” immigrant workers are often difficult to study and personal interaction as well as venue-based sampling was deemed the most appropriate in order to get an accurate sample (Kissinger et al., 2008). Therefore, it is important for researchers to develop a trusting atmosphere that provides ensured confidentiality to respondents (Kissinger et al., 2008).

**The Future of Crawfish Farming**

As the farming industry ages, there have also been reported drastic changes in farm labor and risks associated with working in the agriculture industry (Myers, Layne, & Marsh, 2007). The age of farmers in the agriculture sector is found traditionally in the age range of 35-54 (USDA Economic Research, 2008). The U.S. Department of Agriculture Economic Research reported in 2005 that the age of farm operators and management is in an older ranged group when compared to other populations of workers in the United States (Figure 13). There was also a measured increase in overall age among farm managers in population groups compared to other occupations in the United States (over 55), while the actual farm laborers were in a younger age group category (under 35) (Martin, 2002).
An observed growth in rural areas is a main attractant for the agricultural sector in relation to Hispanic immigrant labor (Vergunst, 2008). According to Myers, there has been a classification and labeled of high risk associated with farm workers and managers in the 55 years and over age range in the agriculture industry (2007). Myers stated that the “baby-boom” generation will begin turning 65 years old in 2012 and this will subsequently result in agricultural farm operators being the highest category of aging workers in the United States (2007). Myers (2007) also stated that the average age of farm operators has increased from 50.3 years old in 1978 to 55.3 years old in 2002 and will continue to increase steadily over time. Over half of the U.S. farm operators in 2002 were over that age of 54 (NASS, 2005). This data represented the overall population of farm operators across the United States in 2002 and predicted an increase in age as time progresses. The Louisiana crawfish farm worker population
was included in this reported sample and is the primary focus group for this study. Within farming operations and the agriculture industry, there have been noted changes that over time have and will continue to change the face of agriculture in the social constructs in the United States (Remble, Keemey, & Marshall, 2010). With change, there comes a certain amount of personal resistance and subsequent barriers that must be addressed when it is related to practice and policy implementation in agriculture programs (Kirschenmann, 2007). Kirschenmann (2007) stated that one barrier that must be addressed is the aging population of farmers currently serving the agriculture industry. The change in age, according to Kirschenmann, has reported as a drastic increasing change from the year 1950, where 20% of farmers were under the age of 35 and less than 15% over the age of 65 to the year 2002, where currently only 6 percent were under the age of 35% and 27% of the farmers were over 65 years of age (2007). As this population dynamic change occurs, extension educators, program developers, and stakeholders must address and implement perceived future aspirations that farmers have to address operations in order for successful educational extension high impact programs to continue supplying quality information for agricultural producers as well as to serve the public properly.

Figure 14 notes the relationship of time as it relates to the number of years migrants workers may be employed in farm labor in comparison to documentation status, which reports that documented farm laborers are more likely to remain in the United States past 10 years. On the other hand, undocumented workers may only remain in the industry for a maximum of 10 years before either becoming documented or returning to their home countries. These Hispanic migrant farm workers could potentially be a source of relief for the aging ownership of farm labor. As the farmers and operators increase in age, the management within the agricultural industry operations must be continued by another operator or knowledgeable party.
Figure 14. Number of years of agriculture farm work by Hispanic farmworker documentation status. Taken from “Findings from the national agricultural workers survey: A demographic and employment profile of United States farm workers,” by the U.S. Department of Labor. 2005. Research Report no. 9. Washington D.C.

Remble (2010) discussed the multiple possibilities of change within management of farm operations. Traditionally, there has been a trend that farms were historically passed down generationally to the children of current owners and operators; however, this tradition has decreased over time and replacement management is becoming scarce (resulting in the aging population (Remble, 2010). There are government subsidies available to assist farm operators in order to allow change in management; however, a disfavor of the public perception that would allow farms to become corporate owned is also prevalent as the public reports potential quality related to crop production may also decrease (Remble, 2010).

Remble (2010) noted that many farm operations have a smoother transition if multiple operators at multiple levels of age as well as responsibility continuously interact as farm operations change management and labor personnel. This type of system allows for smoother
overall production change in operations, whereas abrupt changes in operation structure would report reductions in overall profitability and farm worker morale through potential mistrust or unawareness (Remble, 2010).

Whether the change of farm operations are within family operations or to other sources (such as corporate ownership and operations), there may also be problems with finding and securing operators that are found within the younger age categories in the available population in the future to continue running these operations (Kirschenmann, 2007). Therefore, alternate farm employee resources are necessary in order to develop a pool of younger workers and managers to ensure continuous operations on independently owned and operated agriculture operations (Kirschenmann, 2007).

**Agriculture Extension Outreach**

Extension outreach programs can be very beneficial to farmers as well as the Hispanic farm worker populations who are involved in the agricultural industry in terms of delivering educationally appropriate information and successful high impact extension programs to the industry (Garcia, 2005; Jones & Larke, 2005). The number of Hispanic immigrants entering the agriculture workforce continues to increase in dramatic numbers and agriculture extension services should respond with educational programs that can meet the needs of this growing diverse clientele (O’Sullivan, 2000). The content of agriculture extension programs should be designed with a culturally diverse atmosphere in mind that would best serve the community as a agriculture commodity producing system as opposed to the traditional population observed in row crop programs (which are the highest number of extension programs currently delivered and structured in the United States) (Ewert & Rice, 1994; O’Sullivan, 2000).

In 2000, studies were reporting that many small farmers were completing and administering their own research and extension programs were having difficulties in meeting the
needs of smaller farms due to the implementation of larger farm corporations and the prevalent desire to meet the needs of the corporations was evidently more impacting over smaller farms operation needs (O’Sullivan, 2000). However, this program delivery system has also continuously recognized a need in extension programs to serve these smaller farm operators regardless of the number of immediate clientele locale (O’Sullivan, 2000). In addition, if effective programs are in place, the new populations of farmers can be a source of support for extension educators in all commodity groups (O’Sullivan, 2000).

Garcia stated that many times in research is the reported fact that there is an undercounted and underestimated population of Hispanic immigrant workers in the agriculture industry (2005). Therefore, consultants and producers in the agriculture industry must recognize and reach out to this population and respect the hidden workforce that is prevalent in the industry (Ewert, 1994; Garcia, 2005). When the Hispanic population is not included in many programs, a resultant perception of discrimination may lead to increased mistrust as well as undue stress within the population of Hispanic immigrant farm workers (Flores, Tschann, Dimas, Bachen, Pasch, & Groat, 2008). Therefore, programs related to education should include not only Hispanics, but also all ethnically diverse populations in an area (Flores et al., 2008).

While designing educational curriculums that best suit the needs of the Hispanic immigrant farm worker population, Farner et al. (2005) stated that students often recognize the need for multiple systems of education. Students from traditionally Hispanic backgrounds desire and thrive in many educational settings designed and provided in many high impact agriculture extension programs (Farner et al., 2005). Extension programs generally differ from traditional classroom educational settings because they offer more hands-on approached rather than teacher directed, which has proven more beneficial to student learning in various populations (Farner et al., 2005).
However, it is important to assess the educational program consumer group and the needs of the specified group in terms of participation and expectations (Driscoll, 2003). Groups in education tend to achieve at a much higher rate if a purpose is recognized and accepted by all stakeholders involved (Driscoll, 2003). Delgadillo (2003) also recognized and reported the need to grasp the attention of clients as an indication of a program’s success. There are specific techniques reported that should be utilized when consulting, counseling, and/or providing educational support lower income Hispanic clientele (Delgadillo, 2003). When consulting and educating monolinguisitic Hispanic immigrants, one must be aware of body language and respond if no objective based information is previously established with a specific audience (primarily due to the mistrust already established between many Hispanic immigrant populations and government entities) (Delgadillo, 2003). Delgadillo (2003) noted that body language would be the key point of decisiveness for clients in successfully consulting and communication with a culture that may not speak or understand the language (Delgadillo, 2003). Delgadillo also indicated that maintaining facial expressions and contacts that are positive will enhance techniques when consulting the Hispanic immigrant populations and decrease overall mistrust by the potential audience members (2003).

Stallones et al., 2009, stated that Hispanic immigrants working in the agriculture industry tend to be concerned about physical and mental health as a faceted need to support the family structure. Mazzoni et al. (2007) and Weigel et al. (2007) indicated that many Hispanic immigrant workers who are away from families would also suffer from significant depression when compared to cohorts who have community ties and/or a family structure. This also indicated that a strong family support may be an identified reason for Hispanic immigrants to be accessed by extension in order to help promote agriculture safety programs as well as link programs that provide educational support to these workers who are reported to eventually be
accompanied by family or return home after a short period of time for employment purposes (Stallones et al, 2009; Villarejo et al., 2010).

In extension, there is a recognized observation by the educational community that a Hispanic focus group in the community is essential (Malek, 2002; Flores et al., 2008). In urban agricultural servicing programs, extension workers who have offered programs to Hispanic populations have proven to be successful, even when limited knowledge of the spoken languages is available (Bauske, Martinez-Espinoza, Maqueda, & Chance, 2008). Therefore, educational programs offered to Hispanics may be more generally accepted due to the availability of new educational information being offered to a population (such as immigrant farm workers) who have been traditionally disregarded in the farming industry for information, showing an interest and overall care to reach out to this vulnerable group (Bauske et al., 2008; Malek, 2002). Extension should focus on the large group of growing Hispanics who have educational needs in the agriculture industry as well as the classroom, such as learning the English language (Malek, 2002). In addition, becoming more aware of safety standards through programs designed and delivered that can be easily understood by the Hispanic population of workers who are the ultimate consumers and stakeholders for this new information is important for educational programs to be successful (Malek, 2002).

When assessing the needs of farmworkers, surveys have indicated that Hispanics, as a majority, do want to learn on the job (Farner et al., 2005). According to Table 1 and Figure 15, 71% of farmworkers report only having a single farm employer in the United States and over 25% of the Hispanic immigrant farm worker employees also reported staying longer than 5 years in farm employment as well. Therefore, it is important to reach out and educate these individuals through high impact programs due to the relatively long period of time Hispanics reportedly remain in the United States (Table 1). However, individuals who are providing these programs
Table 1. Distribution of Farm Workers and Amount of Time Employed

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percent of Crop Workers (%)</th>
<th>Mean Farm Workdays (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of U.S. farm employers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>183</td>
</tr>
<tr>
<td>2</td>
<td>71</td>
<td>200</td>
</tr>
<tr>
<td>3+</td>
<td>11</td>
<td>215</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Years of U.S. farm work reported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than two years</td>
<td>8</td>
<td>68</td>
</tr>
<tr>
<td>2-4</td>
<td>24</td>
<td>175</td>
</tr>
<tr>
<td>5-10</td>
<td>26</td>
<td>202</td>
</tr>
<tr>
<td>11-20</td>
<td>23</td>
<td>212</td>
</tr>
<tr>
<td>21+</td>
<td>18</td>
<td>219</td>
</tr>
<tr>
<td>Total</td>
<td>99^a</td>
<td></td>
</tr>
</tbody>
</table>

Note. This table was taken from Farner et al., 2005.
^aThe percentages for the variables “Years of U.S. farm work reported” as reported by Farner et al. (2005) do not total 100% due to rounding.

must also contribute to the body of knowledge that the Hispanic individuals, with regards to extension, expect, which is ultimately to be treated with the same amount of opportunities available as peers (Farner et al., 2005; Martinez-Espinoza, 2003). According to Rao (2004), extension agents that were surveyed tend to have a misinterpretation of Hispanic exposure and safety with regard to pesticide exposure (Rao, 2004). Exceeding these expectations will ultimately enhance an extension program as well as the audience’s perception of an educational consulting practice or high impact extension program (Martinez-Espinoza, 2003).

The graph in Figure 15 shows that many farmers stay in a single area for extended time periods and could be a source for disseminating information that would benefit incoming new employees from various regions. When consulting extension programs and workers, it is important to also recognize any changes in policy and communicate potential needs of the Hispanic population to stakeholders in order to enhance extension programs as well as increase trust in the educational outreach program area related to migrant Hispanic immigrant farm workers (Rao, 2004).

In addition, when learning from the Hispanic population, it is important for educators to stay involved with the community and the population that regularly contributes to community efforts in educational systems and the children served (Gregory, Camarillo, Campbell, Dasher, King, Mann, Snell, Sousa, Steniberg, and Willmarth, 2006). Motivation for community involvement in the Hispanic community takes respecting the culture and motivation of the family community as well as the surrounding community in agriculture (Gregory, 2006). According the segmented assimilation theory, the more opportunities available for individuals, the better adapted they will become in society (Altschul, Oyermann, & Bybee, 2008; Warner, Fishbein, & Krebs, 2010).

Many other industries offering educational services at diverse levels, perceptions in different locations tend to vary region-to-region (Asadi, Akbari, Sharifzadeh, & Hashemi, 2009). It is important for agricultural extension outreach potentials in multiple commodities to be used
in order to provide the best benefit for all consumers available as well as to increase the knowledge base of all stakeholders involved (Asadi, Akbari, Sharifzadeh, & Hashemi, 2009).

There is also a concern that Hispanic immigrants are undercounted in the agricultural census, primarily due to factors related to apprehension, language barriers, and potential documentation (or lack of) status (Garcia, 2005). This study offers potentially opportunities to address the need to reach beyond language barriers as well as potential immigration documentation status because Hispanics receiving the survey were also covered under the H2A visa status.

**Summary**

As the literature shows, a need for agricultural extension outreach is necessary. This study sought to improve the extension response to Hispanic immigrants who come to work in crawfish farm operations in Louisiana by objectively inquiring about the expectations of Hispanic crawfish farm employees in comparison to Caucasian U.S. citizen crawfish farm employees. The information provided in this study is more current and accurate than the information that is currently available to the LSU AgCenter from other sources. This information should support the LSU AgCenter’s efforts to create and develop high impact programs that will best serve stakeholders and potential future clientele.

The information obtained from respondents may also be useful in assisting educational program developers in the design and implementation of educational programs in response to the needs of crawfish farm clientele. Another objective will explore the extent at which Hispanics as well as Caucasian U.S. citizen crawfish farm operation employees desire educational information and programs to impact agriculture operations in the future. The study also explored the future career expectations of crawfish farm employees partially to address the aging population of crawfish farmers in the agriculture industry.
CHAPTER 3: METHODOLOGY

Population and Sample

The purpose of this study was to compare education values as well as future aspirations of both Caucasian U.S. citizens and Hispanic immigrants that are employed in Louisiana crawfish farm operations in order to assist education and agriculture extension programs to better serve the community. The target population for this study was all crawfish farm employees that are identified as Caucasian American citizens and Hispanic immigrants working in crawfish farming operations in Louisiana.

The accessible population was composed of crawfish farm employees ($N=4,844$) of operations ($N=1,211$) that have physical mailing addresses, email addresses, or contact phone numbers in the LSU AgCenter database and were present in December 2010 through February 2011. The number of crawfish farm employees fluctuates depending on the seasonal availability of live crawfish. It was estimated by the author that there were approximately four employees in the typical crawfish farm operation during the sample months in the season, which served as the basis for estimating that there are approximately 4,844 crawfish farm employees in Louisiana.

The contact list utilized in the LSU AgCenter database corresponded with the LSU AgCenter’s Agriculture Summary publication (LSU AgCenter, 2009) that lists population numbers of producers classified within specific commodities; therefore, the database of contact information appropriately provided the correct population estimates for the number of crawfish producers in Louisiana along with recorded contact information.

H2A visas are provided specifically for agriculture employment and are offered to migrants on an annual basis. In 2006, there were 417 H2A visas assigned to Hispanics for Louisiana crawfish farm operation employment, according to the U.S. Department of Agriculture Farm Service Agency (USDA-FSA, 2009). Therefore, the researcher estimated that
approximately 8.6% (417 out of 4,844 employees) of the sampled population would be documented Hispanic immigrant workers.

A random cluster sample was used for this study. The random cluster sample was taken from the population of Louisiana crawfish farm employees (N=4,844). Cochran’s sample-size formula (1977) was used to determine the appropriate sample size required for the study. The following standards were set in order to determine an appropriate sample size:

- The estimated population of crawfish farm employees was N = 4,844.
- Level of significance: An alpha level of .05 was used for the two-tailed tests. The critical t-value for an alpha level of .05 is 1.96.
- The primary variables of interest were measured on a 4-point Likert type scale.
- A 3% acceptable margin of error (e=.03) was used.
- The estimated standard deviation was 0.67. This estimate was calculated by dividing the number of points on the primary scale, which is four, by the number of standard deviations that encompass 99% of responses, which is six; therefore, 4/6 = .67.

These values were inserted into Cochran’s (1977) sample size formula as follows:

\[ n = \frac{(\alpha)^2 \times (sd)^2}{(e)^2} = \frac{(1.96)^2 \times (0.67)^2}{(4 \times 0.03)^2} = 119 \]

Therefore, the required minimum returned sample size required according to Cochran’s sample size formula was 119 respondents.

Since it had been estimated that there were four workers per crawfish farm, it was estimated that responses would be needed from approximately 30 crawfish farms (4 \times 30 = 120, which was 1 more than the minimum 119 required). Because the expected voluntary participation rate was expected to be as low as 65%, the researcher randomly selected 47 crawfish farming operations from the database for the sample population since a 65%
participation rate from the 47 operations was expected to produce approximately 30 operations that would voluntarily participate.

The timeline for data collection for both the pilot tests and the research study are shown in Table 2. This information is provided at this point in this chapter so that it will be easier for the reader to understand the discussion of the instrumentation, pilot tests, and data collection that follow.

Table 2. Timeline for Collection of Data for Pilot Testing and Study

<table>
<thead>
<tr>
<th>Dates</th>
<th>Description</th>
<th>Respondents (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/17/2010</td>
<td>Email sent to all producers making them aware of study</td>
<td>N/A</td>
</tr>
<tr>
<td>10/4/2010</td>
<td>Pilot test 1 initiated</td>
<td>N/A</td>
</tr>
<tr>
<td>10/16/2010</td>
<td>Pilot test 1 concluded with 7 cooperating operations</td>
<td>35</td>
</tr>
<tr>
<td>11/19/2010</td>
<td>Pilot test 2 initiated</td>
<td>N/A</td>
</tr>
<tr>
<td>11/30/2010</td>
<td>Pilot test 2 concluded with 3 cooperating operations</td>
<td>11</td>
</tr>
<tr>
<td>1/3/2011</td>
<td>Data collection for study began</td>
<td>N/A</td>
</tr>
<tr>
<td>2/11/11</td>
<td>Data collection for study concluded with 31 cooperating operations</td>
<td>130</td>
</tr>
</tbody>
</table>

Note. Data were collected using the same collection method for all three collection periods. None of the data from the pilot studies was used in the data for the final study.

**Instrumentation**

The survey was designed to meet the objectives of this study. The content of the survey was based on the review of the literature and on the researcher’s professional experience with the crawfish farm employee population. The survey may be found in Appendix A. The employee surveys were offered in Spanish as well as English in order to overcome any language barriers that could exist among the tested population.

To develop a bilingual survey instrument, the researcher scripted each question in English and sent those items to a fluent Spanish/English resident of Columbia for translation. The translated Spanish items were sent to a fluent Spanish/English resident in Mexico for
translation into English. The researcher compared the two translations in order to verify that items in the instrument were valid and would not be misconstrued in context of grammar or in language mechanics. In addition, suggestions from the voluntary Mexican resident were taken into consideration when developing the precise wording for specific questions used in the instrument.

There are two sections in the survey (Appendix A). The first section contained questions about the respondents’ personal and demographic characteristics. In the second section, respondents responded to items about their career goals, aspirations for their children in education, values related to education, future expectations of employment in the crawfish industry, importance of money to the crawfish farm employees, and perceived importance of migrant workers in agriculture using a four point Likert type scale (1 = not important, 2 = slightly important, 3 = important, or 4 = highly important). These questions were aligned with objectives identified in the study. Members of the researcher’s graduate committee reviewed the instrument for face validity. In addition, a panel of extension aquaculture professionals examined the instrument for face and construct validity. Two pilot tests were conducted. Analysis of the data from the first pilot test revealed that some alteration of item wording was needed. The second pilot test was conducted to ensure that the revised wording was effective. After completing two pilot tests with the instrument, it was deemed valid as a result of a visual analysis of the completed questionnaires and as a result of the reliability assessment conducted on each scale in the instrument.

**Pilot Tests**

A pilot test of the data collection method and the research instrument was conducted to assess whether the instrument would elicit valid results and to determine if the data collection methods would work with this population. Seven crawfish farm operations were randomly
selected from the farms remaining on the list provided by the LSU AgCenter list after the random sample for the study had been drawn. The pilot test was conducted in October 4-16, 2010, and the data from the 33 questionnaires returned was used for the assessment of the instruments and data collection procedures. The analysis of the face validity of the data and the scale reliabilities revealed that some items in two of the scales were not adequately reliable. After assessing the face validity of these items, it was determined that minor editing was necessary because these items appeared to be vague or the intent of the item may have been misconstrued. The items in the two scales were revised as a result of this assessment.

After revisions to the initial pilot test instrument, a second pilot test was completed November 19-30, 2010, with three crawfish farm operations that were not part of the random sample of the study, yielding 11 responses. Again, face validity and reliability assessments were conducted. The face validity assessments indicated that the revisions had been successful. Cronbach’s alpha coefficients were calculated for all six scales in the instrument and produced reliability ratings that ranged from $r = 0.80$ to 0.97. Cronbach’s alpha ratings above 0.80 are considered to be exemplary according to Robinson (1991). Since no additional revisions of the instrument were determined to be necessary, it was deemed that the instrument was valid and reliable for assessing the accessible population. The results on the reliability analysis are presented in Table 3.

**Data Collection**

Utilizing the crawfish operation distribution list, phone calls were made to operations managers/owners in order to obtain support from the industry prior to survey administration. In order to increase response rate and to ensure the minimal sample size was acquired, the researcher arranged to travel to crawfish farm operations to administer surveys to potential respondents. This method was deemed as the best way to obtain data from vulnerable
populations who may not have access to Internet or regular postal mail service (Dillman et al., 2008). Managers/owners of the randomly selected crawfish farm operations were asked

Table 3. Objective Alignment with Item Number in the Instrument and corresponding $r$ value based on Cronbach’s $\alpha$ Internal Consistency Coefficient

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
<th>Item Numbers in Instrument</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demographic and personal characteristics</td>
<td>1-4</td>
<td>n/a</td>
</tr>
<tr>
<td>2</td>
<td>Value placed on education in general</td>
<td>5-9</td>
<td>0.90</td>
</tr>
<tr>
<td>3</td>
<td>Value placed on children’s education</td>
<td>10-15</td>
<td>0.87</td>
</tr>
<tr>
<td>4</td>
<td>Importance of monetary earnings</td>
<td>16-18</td>
<td>0.80</td>
</tr>
<tr>
<td>5</td>
<td>Importance of career plans</td>
<td>19-21</td>
<td>0.87</td>
</tr>
<tr>
<td>6</td>
<td>Importance of working on a crawfish farm</td>
<td>22-26</td>
<td>0.86</td>
</tr>
<tr>
<td>7</td>
<td>Value placed on migrant workers</td>
<td>27-30</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Note: Cronbach’s $\alpha$ ratings above .80 are considered exemplary (Robinson, 1991). Each objective was aligned with grouped items from the instrument.

permission to allow surveys to be administered by the researcher of the study to voluntary farm workers in the operation. The employee surveys were administered to all employees with oral instructions given by the researcher identifying the use of the survey as well as the employees’ willingness to complete the survey as confidential and voluntary. The oral instructions utilized are presented in Appendix B. Beginning January 3, 2011, 47 crawfish farm operators were contacted and asked to allow their employees to complete the survey. Eleven operators declined to allow workers to participate. Six were not reachable. The remaining 31 operators agreed to allow their farm workers to participate in the study, which yielded 130 valid instruments. The data collection ended on February 11, 2011. The data was collected through personal contact of farm workers and participation was deemed voluntary by respondents and the respondents was assured that the collected information would remain confidentiality.
Institutional Review Board Approval

A written request for the approval of projects that use human subjects was sent to the
LSU Institutional Review Board (IRB) prior to survey distribution. The LSU IRB approval
number for this study was assigned as E5176 and is attached in Appendix C. The SPSS syntaxes
for the data analyses for the two pilot tests and for the research responses from the populations
sample are presented in Appendices D, E, and F.

Data Analyses

Descriptive statistics (M, SD, #, %) were used to report the descriptive data relative to the
sample reported for objectives 1 thru 7. The alpha for all tests of statistical significance reported
below was preset at 0.05. The individual items in each scale utilized for objectives 2-6 may be
found in the research instrument (Appendix A). IBM SPSS Statistics software (Release 19,
2010) was used to analyze the data. The IBM SPSS syntax for the two pilot tests and the final
study may be found in Appendices D, E, and F.

For objective 1 (compare demographic and personal characteristics), t-tests and Chi-
square tests of independent distribution were used to determine if differences existed in the
employees’ demographic (gender, age and ethnicity) and personal characteristics (number of
years in crawfish operations, educational attainment, country of citizenship, and if farm workers
were permanent or seasonal by ethnic classification (by whether the work was white or
Hispanic). Other ethnic categories were not utilized because there were only three workers in the
sample who were not either white or Hispanic and this number was insufficient for analysis.
Age category was a numeric entry that allowed for respondents to write in the age. Ethnic
selections chosen for the instrument were Caucasian, Hispanic, African American, Asian, or
other. Highest level of education completed choices were: less than middle school, attended
middle or high school, high school diploma or GED certificate, associate degree, and bachelor’s
or graduate degree attained. Respondents were asked to write in the number of years employed
in the crawfish farming industry and subsequent questions were asked with a yes or no response.

The chi square test of independent distribution was used to determine if personal
characteristics and demographic data were independently distributed by ethnicity. According to
Kotrlik, Williams, and Jabor (2011), the appropriate effect size statistic used to interpret
associations found through the results of the chi square test of independent distribution for
ethnicity and selected personal and demographic characteristics is Cramer’s Phi. Guidelines for
interpreting Cramer’s Phi are shown in Table 4.

Table 4. Guidelines for interpreting Cramer’s Phi Effect Size Coefficients

<table>
<thead>
<tr>
<th>Values</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00 and under .10</td>
<td>Negligible association</td>
</tr>
<tr>
<td>.10 and under .20</td>
<td>Weak association</td>
</tr>
<tr>
<td>.20 and under .40</td>
<td>Moderate association</td>
</tr>
<tr>
<td>.40 and under .60</td>
<td>Relatively strong association</td>
</tr>
<tr>
<td>.60 and under .80</td>
<td>Strong association</td>
</tr>
<tr>
<td>.80 and under 1.00</td>
<td>Very strong association</td>
</tr>
</tbody>
</table>

Note. Information in this table was derived from Kotrlik, Williams, & Jabor (2011).

For objectives 2 thru 7, inferential t-tests were used to determine if differences existed in
the mean scale ratings by racial/ethnic classification derived from individual questions that
related to aligned objectives in the instrument. Because there were only 3 respondents who
identified as African American, which is less than the minimum cell requirement of 5
respondents (Cochran, 1977), t-tests were used to compare those respondents who self-identified
as Hispanic or Caucasian U.S. citizen. Summated mean levels of perceived importance (1-4) and
standard deviations were derived from responses to a Likert-type instrument and were computed
from the responses to items designed and aligned for each objective.
If the \( t \)-test results from each objective identified significant differences in variable means by ethnic category, then the effect size coefficient Cohen’s \( d \) was calculated (1988) and Cohen’s descriptors for Cohen’s \( d \) were utilized to interpret the effect size of the differences identified in scale means by ethnic group. Cohen’s guidelines for interpreting the Cohen’s \( d \) coefficient are shown in Table 5.

Table 5. Guidelines for Interpreting Cohen’s \( d \) Effect Size Coefficients

<table>
<thead>
<tr>
<th>Cohen’s ( d ) value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than .20</td>
<td>Negligible effect size</td>
</tr>
<tr>
<td>.20-.49</td>
<td>Small effect size</td>
</tr>
<tr>
<td>.50-.79</td>
<td>Medium effect size</td>
</tr>
<tr>
<td>.80 or larger</td>
<td>Large effect size</td>
</tr>
</tbody>
</table>

Note. Cohen’s effect size coefficients can range from -3.00 to +3.00. Table information derived from Cohen (1988).
CHAPTER 4: FINDINGS

The purpose of this study was to compare career goals and educational values of Caucasian U.S. citizens and Hispanic immigrants that are employed in Louisiana crawfish farm operations in order to assist education and agriculture extension programs to better serve the communities where crawfish farms exist. In addition, this study sought to describe and compare personal characteristics of crawfish farm employees in Louisiana related to attained education and previous crawfish farm employment experience. Data collection took place during January 2011 and February 2011. A random cluster sample of 130 crawfish farm employees consented to participate in this study. The findings are reported for each research objective.

The $t$-tests and Chi-square tests conducted in this study as described in the discussion in this chapter compared the responses between Caucasian U. S. citizen and Hispanic immigrant respondents. The African-American respondents were not included in the analyses since there were only three African-American respondents and Cochran (1977) indicates there should be a minimum of five respondents in each category for a $t$-test. In addition, Hollander and Wolfe (1999) indicate that the expected frequency count for each cell in the contingency table must be five for the Chi Square test of independent distribution and that no more than 20% of the cells in the contingency table should have fewer than five observations. Since the number of African-Americans in the study is only three, it was not appropriate to include African-American responses in the Chi Square tests of independent distribution since these minimums could not be satisfied.

All descriptive information for each objective will be presented first. Then, the descriptive data will be followed by $t$-tests or Chi square analyses for comparisons between the two ethnic groups.
For Objectives 2-7, respondents were asked to rate individual statements designed to measure each construct using a four point scale that ranged from 1 = “not important,” 2 = “slightly important,” 3 = “important,” and 4 = “highly important.” Then, the responses on the individual items in each scale were averaged to produce the mean rating for each individual scale. The following interpretation ranges for the overall scale means were developed for use in interpreting the mean scale ratings:

- Mean = 1.0 – 1.49 was interpreted as “not important”
- Mean = 1.50 – 2.49 was interpreted as “slightly important”
- Mean = 2.50 – 3.49 was interpreted as “important”
- Mean = 3.50 – 4.00 was interpreted as “highly important”

**Objective 1: Demographic and Personal Characteristics of Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers in Louisiana**

The first objective was to describe and compare the demographic and personal characteristics of Caucasian U.S. citizens and Hispanic immigrant farm workers in Louisiana. This information provided information related to the specific backgrounds of crawfish farm employees. The personal characteristics for all farm workers were gender, ethnicity, age, number of years working in crawfish operations, educational attainment, country of citizenship, employee status (seasonal or permanent), if crawfish farming was the primary job, and whether or not they were in the United States for the first time.

**Gender and Ethnicity**

Almost all respondents in the study were male (97.7%, n=127) and 3.2% (n=3) were female (Table 6). Respondents were also asked to identify their gender for the study as ‘Caucasian,’ ‘Hispanic,’ ‘African American,’ ‘Asian,’ or ‘Other.’ As the data in Table 7 shows,
79.2% of the respondents \( (n=103) \) self-identified as Caucasian, 18.5% \( (n=24) \) were Hispanic, and 2.3% \( (n=3) \) were African American.

**Table 6. Gender of Louisiana Crawfish Farm Employees**

<table>
<thead>
<tr>
<th>Gender</th>
<th>( n )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>127</td>
<td>97.7</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. 130. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

**Table 7. Ethnicity of Louisiana Crawfish Farm Employees**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>( n )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>103</td>
<td>79.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>24</td>
<td>18.5</td>
</tr>
<tr>
<td>African American</td>
<td>3</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

**Age**

The ages of respondents ranged from 19 years to 52 years (Table 8). As indicated in Table 8, the most frequently reported age group was 37 years \( (n=14, \ 11.0\%) \). The mean age for the population of crawfish farm employees in Louisiana participating in the study was 34.42 years \( (SD= \ 6.50) \).

**Number of Years Employed on Crawfish Farm Operation**

The respondents were asked to indicate the number of years they had been working on a crawfish farm in Louisiana (Table 9). The mean number of years the respondents reported they had been working on a crawfish farm was 8.43 \( (SD=6.13) \). The most frequently reported number
Table 8. Age of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Age (in years)</th>
<th>n</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>3</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>3</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>2</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>6</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>8</td>
<td>6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>10</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>7</td>
<td>5.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>6</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>14</td>
<td>11.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>7</td>
<td>5.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>3</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>2</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>10</td>
<td>7.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>4</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>3</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>4</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>4</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total | 130 | 100.0 | 34.42 | 6.50 |

Note. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.
Table 9. Years of Crawfish Farm Employment of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Years of Crawfish Farm Employment</th>
<th>n</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>9.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>12.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>19</td>
<td>15.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>7</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>5</td>
<td>3.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>9</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>7</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1</td>
<td>.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>2</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100.0</td>
<td>8.43</td>
<td>6.13</td>
</tr>
</tbody>
</table>

Note. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

of years working on a crawfish farm was reported as 10 (n=19, 15.0%) (Table 9). Less than one-fourth of the respondents (n=28, 22.0%) indicated that they had 2 years or less experience working as a crawfish farm employee.

Educational Attainment

The respondents indicated their level of educational attainment by selecting one of the following options: less than middle school attendance, attended middle or high school, high
school diploma or graduate equivalency diploma (GED), associate degree from a community or technical college, or a bachelor’s or graduate degree. Educational attainment as reported by respondents is presented in Table 10. The total number of respondents reporting having earned a high school diploma or GED was 82 (63.1%); this was the most frequently reported category of educational attainment (Table 10). The two categories with the smallest number of respondents was those respondents who reported they had a bachelor’s degree or higher (n=6, 4.6%) as well as those that indicated they had less than a middle school education (n=7, 5.4%). These data are presented in Table 10.

Table 10. Educational Attainment of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; Middle School</td>
<td>7</td>
<td>5.4</td>
</tr>
<tr>
<td>Middle School/High School</td>
<td>27</td>
<td>20.7</td>
</tr>
<tr>
<td>High School Diploma/GED</td>
<td>82</td>
<td>63.1</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>8</td>
<td>6.2</td>
</tr>
<tr>
<td>Bachelor Degree or Higher</td>
<td>6</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>130</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

Country of Citizenship

The respondents were instructed to record their country of citizenship using the following options: ‘USA,’ ‘Mexico,’ ‘Columbia,’ ‘El Salvador,’ or ‘Other.’ Most of the respondents (n=106, 81.5%) reported that they were from the USA while less than one-fifth (n=24, 18.5%) were citizens of Mexico (Table 11). All of the respondents reported either USA or Mexico as their country of citizenship. Also note that those respondents who self-identified as being Hispanic (n=24, 100.0%) also indicated as being from Mexico, while all of the Caucasian U.S. citizens (n=103, 100.0%) indicated they were from the USA, and all of the African Americans
participating \((n=3, 100.0\%)\) indicated that their country of citizenship was the USA. For this reason, the researcher deemed respondents from Mexico as Hispanic immigrants and Caucasian respondents as Caucasian U.S. citizens. None of the respondents reported being citizens of Columbia, El Salvador, or other countries.

Table 11. Country of Citizenship of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Country of Citizenship</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>106</td>
<td>81.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>24</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>130</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note. \(N=130\). Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

**Employment Status**

The respondents were asked to report their employment status as permanent or seasonal. Almost two-thirds of the respondents \((60.8\%, n=79)\) indicated that crawfish farming was a permanent job while 38.5\% \((n=50)\) indicated crawfish farming was a seasonal source of employment (Table 12).

Table 12. Employment Status of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>79</td>
<td>60.8</td>
</tr>
<tr>
<td>Seasonal</td>
<td>50</td>
<td>38.5</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>130</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Note. \(N=130\). Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

**Primary or Secondary Job**

The respondents were asked to indicate if crawfish farming was their primary job or if crawfish farming was a secondary job. The respondents were asked to respond either “yes” or “no” to this statement. The total number of farm workers who identified crawfish farming as
their primary job was 43.9% ($n=57$) while 55.4% ($n=72$) indicated crawfish farming was not their primary job (Table 13). Since crawfish farming is a seasonal occupation, many employees may seek employment with the same operation in their rice farming operation since most crawfish farms are also used for rice farming.

Table 13. Whether or Not Crawfish Employment is considered the Primary Job of Louisiana Crawfish Farm Employees

<table>
<thead>
<tr>
<th>Crawfish Farming Was Primary Job</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>57</td>
<td>43.9</td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>55.4</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>130</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $N=130$. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

First Year in the United States

The respondents were queried about whether this was their first year in the United States. Whether or not it was a crawfish farm employee’s first time (as stated in Table 14) in the United States was reported as a “yes” or “no” structured response. As Table 14 indicates, none (.0%) of the respondents indicated that it was their first time in the United States, with 129 (99.3%) indicating this season as not their first time in the United States and with 1 (.7%) respondent failing to respond to the item.

Comparison of Crawfish Farm Employees Age by Ethnicity

Inferential $t$-tests were used to compare the age of the crawfish farm employees by ethnicity. As the data presented in Table 15 shows, the Caucasian crawfish farm employees were significantly older ($M=35.68$, $SD=6.28$) than the Hispanic employees ($M=29.00$, $SD=4.28$) ($t(125)=4.94, p<.001$). The Cohen’s $d$ coefficient was 1.24 which indicates that a large
difference existed between the ages of the Caucasian \((M=35.68, SD=6.28)\) and Hispanic crawfish farm workers \((M=29.00, SD = 4.28)\).

Table 14. Whether Crawfish Farm Employees Indicated This Was Their First Time in the United States

<table>
<thead>
<tr>
<th>Crawfish Employees’ First Time in the United States</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>No</td>
<td>129</td>
<td>99.3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Data were collected from Louisiana crawfish farm employees from January 3, 2011-February 11, 2011.

Comparison of Ethnicity of Crawfish Farm Employees by Number of Years Working in Crawfish Operations

Inferential \(t\)-tests were used to compare the number of years employed on a crawfish farm by ethnicity. As the data in Table 15 reveals, the Caucasian crawfish farm employees had significantly more years of experience working on a crawfish farm \((m = 9.95, SD = 5.79)\) than the Hispanic employees \((m = 1.88, SD = 1.42)\) \((t(125)=6.81, p<.001)\). The Cohen’s \(d\) effect size coefficient was 1.90, which indicates that a large difference existed between the number of years that Caucasian and Hispanic employees had been working on a crawfish farm (Table 15).

Comparison of Ethnicity of Crawfish Farm Employees by Educational Attainment

The Chi-Square test of independent distribution indicated that the ethnicity of crawfish farm workers was not distributed independently of their reported level of education \((\chi^2 = 11.37, df=2, p = .003)\). The \(phi\) coefficient for this analysis was .30, which indicates that there was a moderate association between ethnicity and education level of crawfish farm workers. The Caucasian crawfish farm workers had a moderately higher level of education than the Hispanic workers. This analysis is presented in Table 16.
Table 15. Comparison of Age and Number of Years Employed on a Crawfish Farm by Ethnicity

<table>
<thead>
<tr>
<th>Scale</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>Levene’s Test</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Age of Crawfish Farm Employee(^a)</td>
<td>35.68</td>
<td>6.28</td>
<td>29.00</td>
<td>4.28</td>
</tr>
<tr>
<td>Number of Years Employed on</td>
<td>9.95</td>
<td>5.79</td>
<td>1.88</td>
<td>1.42</td>
</tr>
<tr>
<td>Crawfish Farm(^b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Cohen’s \(d\) interpretation of effect size: less than .20 is negligible, between .20 and .49 is small, between .50 and .79 is medium, and above .79 is considered large.

\(^a\)Levene’s test for equality of variance was not statistically significant \((F = 3.71, p = .056)\), therefore, equal variances were assumed.

\(^b\)Levene’s test for equality of variance was statistically significant \((F = 20.99, p = <.001)\), therefore, equal variances were not assumed.
Table 16. Chi Square Test of Independent Distribution of Characteristics Reported by Crawfish Farm Workers in Louisiana by Selected Variables

<table>
<thead>
<tr>
<th>Variable/Category</th>
<th>Ethnicity (%)</th>
<th>( \chi^2 )</th>
<th>( p )</th>
<th>( \Phi )</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caucasian</td>
<td>Hispanic</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school diploma or GED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>20</td>
<td>12</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within educational attainment</td>
<td>62.5%</td>
<td>37.5%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% with ethnicity</td>
<td>19.4%</td>
<td>50.0%</td>
<td>25.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of total</td>
<td>15.7%</td>
<td>9.4%</td>
<td>25.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school diploma or GED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>69</td>
<td>12</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within educational attainment</td>
<td>85.2%</td>
<td>14.8%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% with ethnicity</td>
<td>67.0%</td>
<td>50.0%</td>
<td>63.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of total</td>
<td>54.3%</td>
<td>9.4%</td>
<td>63.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher than high school diploma or GED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td></td>
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<tr>
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<td>18.9%</td>
<td>100.0%</td>
<td></td>
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</tr>
<tr>
<td>% with ethnicity</td>
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<td>100.0%</td>
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<tr>
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<th>$\Phi$</th>
<th>Interpretation</th>
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<th>( p )</th>
<th>( \Phi )</th>
<th>Interpretation</th>
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<td>5</td>
<td>79</td>
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<td>6.3%</td>
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<tr>
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<td>20.8%</td>
<td>62.7%</td>
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<td>Count</td>
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<td>19.0%</td>
<td>100.0%</td>
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<td></td>
</tr>
<tr>
<td>% within ethnicity</td>
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<td>100.0%</td>
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<td>% of Total</td>
<td>81.0%</td>
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<td>100.0%</td>
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<th>Ethnicity (%)</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>$\Phi$</th>
<th>Interpretation</th>
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<td>Primary Job</td>
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<td>% within primary job</td>
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<td>100.0%</td>
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<td></td>
<td>% within ethnicity</td>
<td>49.0%</td>
<td>79.2%</td>
<td>54.8%</td>
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<tr>
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</tr>
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<td>Total</td>
<td>Count</td>
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<td>24</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within primary job</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% within ethnicity</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
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<td>% of Total</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
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(table con’d)
<table>
<thead>
<tr>
<th>Variable/Category</th>
<th>Ethnicity (%)</th>
<th>(\chi^2)</th>
<th>(p)</th>
<th>(\Phi)</th>
<th>Interpretation</th>
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<tr>
<td></td>
<td>Caucasian</td>
<td>Hispanic</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
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<td>0</td>
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<td>% within first year in U.S.</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>NA</td>
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<tr>
<td></td>
<td>% within ethnicity</td>
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<td>0.0%</td>
<td>0.0%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>NA</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>102</td>
<td>24</td>
<td>126</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>% within first year in U.S.</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>% within ethnicity</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>NA</td>
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<tr>
<td></td>
<td>% of Total</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
<td>NA</td>
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<tr>
<td>Total</td>
<td>Count</td>
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<td>24</td>
<td>126</td>
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<tr>
<td></td>
<td>% within first year in U.S.</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
<td>NA</td>
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<tr>
<td></td>
<td>% within ethnicity</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>81.0%</td>
<td>19.0%</td>
<td>100.0%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note. \(N=127\). Rea & Parker’s (1992) effect size descriptors were used to interpret Cramer’s Phi coefficient as follows: 0.00 to under 0.10 is negligible association, 0.10 to under 0.20 is weak association, 0.20 to under 0.40 is moderate association, 0.40 to under 0.60 is relatively strong association, 0.60 to under 0.80 is strong association, and 0.80 to 1.00 is very strong association.

\(a\)Some cells had an expected count of less than 5.

\(a\)The Chi-Square Test of Independence could not be completed if over 20% of the cells had an expected count of less than 5. The descriptive data for the contingency table is presented for each variable even though the Chi-Square Test of Independence could not be used.
Comparison of Ethnicity of Crawfish Farm Employees by Country of Citizenship

Since it was obvious after reviewing the data that ethnicity was not distributed independently of country of citizenship, the Chi-Square test of independent distribution was not conducted. Also, two of the four cells in the 2x2 contingency table had an observed count of zero. As shown in Table 16, a perfect association exists between ethnicity and country of citizenship (Table 16). All of the Hispanic immigrants indicated they were from Mexico \( (n=24, 100.0\%) \) while all of the Caucasians indicated they were from the United States \( (n=103, 100.0\%) \).

Comparison of Ethnicity of Crawfish Farm Employees by Employment Status

The Chi-Square test of independent distribution indicated that the ethnicity of crawfish farm workers was not distributed independently of their reported employment status, \( (\chi^2 = 22.22, df=1, p = <.001) \) (Table 16). The \( phi \) coefficient for this analysis was .42, which indicated a relatively strong association between ethnicity and employment status. According to respondents, a larger group of Caucasian U.S. citizens \( (n=74) \) (72.6\%) reported being permanent farm employees, whereas only 5 (20.8\%) of Hispanic immigrants reported being permanent crawfish farm employees.

Comparison of Ethnicity of Crawfish Farm Employees by Primary Job

The Chi-Square test of independent distribution indicated that the ethnicity of crawfish farm employees was not distributed independently of whether their crawfish farm employment was their primary job \( (\chi^2 = 7.13, df=1, p = 0.008) \) (Table 16). The \( phi \) coefficient for this analysis was 0.24, which indicated a moderate association existed between ethnicity and whether or not crawfish farming was the respondents’ primary job (Table 16). More Caucasian U.S. citizen respondents \( (n=52) \) (51.0\%) reported employment in the crawfish industry as a primary job than Hispanic immigrant respondents \( (n=5) \) (20.8\%).
Comparison of Ethnicity of Crawfish Farm Employees by First Year in the United States

Since it was obvious after reviewing the data that ethnicity was not distributed independently of whether this was the respondents first year in the U.S., the Chi-Square test of independent distribution was not conducted. Also, two of the four cells in the 2x2 contingency table had an observed count of zero. As shown in Table 16, a perfect association exists between ethnicity and whether this was the respondents first year in the U.S. All of the Hispanic immigrants \((n=24, 100.0\%)\) and the Caucasians \((n=103, 100.0\%)\) indicated this was not their first year in the U.S.

Objective 2: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Value Placed on Education in General

Objective 2 from the study included 5 questions that Caucasian U.S. citizens and Hispanic immigrant respondents employed on crawfish farm operations in Louisiana \((N=127)\) responded to indicating perceived levels of importance related to education in general. These questions were:

5. How important is educational achievement?
6. How important is a high school diploma?
7. How important is a four-year college degree?
8. How important is school attendance for success?
9. How important is education in your career?

Value Placed on Education in General

The Value Placed on Education in General Scale contained items 5-9 in the research instrument. This scale was used to assess the importance of education in general to the respondents in the study. Cronbach’s \(\alpha\) was calculated to determine the reliability (internal consistency) of the scale. The Cronbach’s \(\alpha\) for the scale was .90, which indicates that the
scale possessed exemplary reliability according to the standards published by Robinson et al. (1991). These data are presented in Table 17.

The highest rated item was on the importance of educational achievement which was rated as highly important by the respondents ($M = 3.58, SD = .54$). The lowest rated item was the importance of education in their career which was rated as important ($M = 3.06, SD = .83$). The scale mean was 3.39 ($SD = .65$) which indicated that the respondents perceived that education in general was important to them (Table 17).

Table 17. Means and Standard Deviations for Crawfish Farm Employees Responses to the Items in the Values Placed on Education in General Scale

<table>
<thead>
<tr>
<th>Statements</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
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<tr>
<td>How important is educational achievement?</td>
<td>126</td>
<td>3.58</td>
<td>0.54</td>
</tr>
<tr>
<td>How important is a high school diploma?</td>
<td>126</td>
<td>3.58</td>
<td>0.53</td>
</tr>
<tr>
<td>How important is school attendance for success?</td>
<td>126</td>
<td>3.49</td>
<td>0.60</td>
</tr>
<tr>
<td>How important is a four-year college degree?</td>
<td>126</td>
<td>3.25</td>
<td>0.77</td>
</tr>
<tr>
<td>How important is education in your career?</td>
<td>126</td>
<td>3.06</td>
<td>0.83</td>
</tr>
<tr>
<td>Scale Mean</td>
<td>126</td>
<td>3.39</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Note. $N=126$. Cronbach’s $\alpha = .90$. $M=1.0-1.49$ interpreted as “not important.” $M=1.50-2.49$ interpreted as “slightly important.” $M=2.50-3.49$ interpreted as “important.” $M=3.50-4.00$ interpreted as “highly important.”

Comparison of Value Placed on Education in General by Ethnicity

Inferential $t$-tests were used to compare the scale mean for Value Placed on Education in General by ethnicity. As Table 18 shows, there was no significant difference found in the Value Placed on Education in General by ethnicity ($t (124) = .336, p = .738$) (Table 18).

Objective 3: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Value Placed on Education of Children

Objective 3 from the study included six questions that to which the Caucasian U.S. citizen and Hispanic immigrant respondents employed on crawfish farm operations in Louisiana ($N=126$) responded to indicate their perceived levels of the importance of their children’s education.
<table>
<thead>
<tr>
<th>Objective #/ Scale</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>Levene’s Test for Equality of Variances</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d^a</th>
<th>Interpretation^a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>F</td>
<td>p</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/Value placed on education in general^b</td>
<td>3.38 0.56</td>
<td>3.43 0.54</td>
<td>.175</td>
<td>.677</td>
<td>-.336</td>
<td>124</td>
<td>0.738</td>
<td>---</td>
</tr>
<tr>
<td>3/Value placed on education of children^b</td>
<td>3.50 0.47</td>
<td>3.44 0.54</td>
<td>1.48</td>
<td>.226</td>
<td>.520</td>
<td>124</td>
<td>0.604</td>
<td>---</td>
</tr>
<tr>
<td>4/Value placed on monetary earnings^c</td>
<td>3.52 0.53</td>
<td>3.85 0.26</td>
<td>18.98</td>
<td>&lt;.001</td>
<td>-2.91</td>
<td>125</td>
<td>0.004</td>
<td>0.79</td>
</tr>
<tr>
<td>5/Value placed on career plans^c</td>
<td>3.44 0.56</td>
<td>2.60 0.87</td>
<td>12.41</td>
<td>.001</td>
<td>5.90</td>
<td>125</td>
<td>&lt;0.001</td>
<td>1.15</td>
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<tr>
<td>6/Importance of working on a crawfish farm^c</td>
<td>3.25 0.65</td>
<td>2.08 0.67</td>
<td>.49</td>
<td>.49</td>
<td>7.89</td>
<td>122</td>
<td>&lt;0.001</td>
<td>1.77</td>
</tr>
<tr>
<td>7/Value placed on migrant workers in the agriculture industry^c</td>
<td>2.61 0.83</td>
<td>3.90 0.29</td>
<td>25.30</td>
<td>&lt;.001</td>
<td>-7.49</td>
<td>122</td>
<td>&lt;0.001</td>
<td>1.27</td>
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</tbody>
</table>

^a Cohen’s d interpretation of effect size: less than .20 is negligible, between .20 and .49 is small, between .50 and .79 is medium, and above .79 is considered large. 
^b Levene’s test for equality of variance was not statistically significant, therefore, equal variances were assumed. 
^c Levene’s test for equality of variance was statistically significant, therefore, equal variances were not assumed.
These questions were:

10. How important is your child’s education for their success?

11. How important is it for your child to attend school?

12. How important is it for your child to complete high school?

13. How important is it for your child to complete a bachelor’s degree?

14. How important is it for your child to earn money to help provide for the immediate family?

15. How important is educational achievement if someone wants to make more money?

**Value Placed on Children’s Education**

The Value Placed on Children’s Education Scale contained items 10-15 in the research instrument. This scale was used to assess the importance placed on the respondents’ children’s education in the study. Cronbach’s *alpha* was calculated to determine the reliability (internal consistency) of the scale (Table 19).

Table 19. Means and Standard Deviations for Crawfish Farm Employees Responses to the Items in the Values Placed on Children’s Education Scale

<table>
<thead>
<tr>
<th>Statements</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important is it for your child to complete high school?</td>
<td>126</td>
<td>3.68</td>
<td>.50</td>
</tr>
<tr>
<td>How important is it for your child to attend school?</td>
<td>126</td>
<td>3.63</td>
<td>.52</td>
</tr>
<tr>
<td>How important is your child’s education for their success?</td>
<td>126</td>
<td>3.51</td>
<td>.58</td>
</tr>
<tr>
<td>How important is it for your child to earn money to help provide for the immediate family?</td>
<td>126</td>
<td>3.42</td>
<td>.64</td>
</tr>
<tr>
<td>How important is educational achievement if someone wants to make more money?</td>
<td>126</td>
<td>3.40</td>
<td>.64</td>
</tr>
<tr>
<td>How important is it for your child to complete a bachelor’s degree?</td>
<td>126</td>
<td>3.29</td>
<td>.77</td>
</tr>
</tbody>
</table>

**Scale Mean Total**

<table>
<thead>
<tr>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>126</td>
<td>3.49</td>
<td>.61</td>
</tr>
</tbody>
</table>

Note. Cronbach’s *alpha* coefficient for scale= 0.87. *M=*1.0-1.49 interpreted as “not important.” *M=*1.50-2.49 interpreted as “slightly important.” *M=*2.50-3.49 interpreted as “important.” *M=*3.50-4.00 interpreted as “highly important.”
The Cronbach’s alpha for the scale was .87, which indicates that the scale possessed exemplary reliability according to the standards published by Robinson et al., (1991). These data are presented in Table 19.

The highest rated item was on the importance for children to complete high school, which was rated as highly important by the respondents ($M=3.68$, $SD=.50$). The lowest rated item was the importance for children to complete a bachelor’s degree, which was rated as important by the respondents ($M=3.29$, $SD=.77$). The scale mean was 3.49 ($SD=.61$), which indicates that the respondents perceived that their children’s education was important to them (Table 19).

**Comparison for Value Placed on Children’s Education by Ethnicity**

Inferential $t$-tests were used to compare the scale mean for Value Placed on Children’s Education by ethnicity. As the data in Table 18 shows, there was no significant difference found in the Value Placed on Children’s Education by ethnicity ($t(124)=.520$, $p=.604$).

**Objective 4: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Value Placed on Monetary Earnings**

Objective 4 from the study included 3 questions that Caucasian U.S. citizen and Hispanic immigrants respondents employed on crawfish farms in Louisiana ($N=127$) responded to indicating values placed on monetary earnings. These questions were:

16. How important is money in your decision to work on a crawfish farm?

17. How important is it for you to learn correct procedures in crawfish farming in order to earn more money?

18. How important is it to save money for the future?

**Value Placed on Monetary Earnings**

The Value Placed on Monetary Earnings Scale contained items 16-18 in the research instrument. This scale was used to assess the importance of monetary earnings to the
respondents in the study. Cronbach’s _alpha_ was calculated to determine the reliability (internal consistency) of the scale. The Cronbach’s _alpha_ for the scale was .80, which indicates that the scale possessed exemplary reliability according to the standards published by Robinson et al. (1991). These data are presented in Table 20.

Table 20. Item Answer Distribution Corresponding to Values Placed on Monetary Earnings

<table>
<thead>
<tr>
<th>Statements</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important is it to save money for the future?</td>
<td>127</td>
<td>3.59</td>
<td>.53</td>
</tr>
<tr>
<td>How important is money in your decision to work on a crawfish farm?</td>
<td>127</td>
<td>3.58</td>
<td>.68</td>
</tr>
<tr>
<td>How important is it for you to learn correct procedures in crawfish farming in order to earn more money?</td>
<td>127</td>
<td>3.57</td>
<td>.61</td>
</tr>
<tr>
<td>Scale Mean Total</td>
<td>127</td>
<td>3.58</td>
<td>.61</td>
</tr>
</tbody>
</table>

Note. _N_=127. Cronbach’s _alpha_ coefficient for scale= 0.80. _M_=1.0-1.49 interpreted as “not important.” _M_=1.50-2.49 interpreted as “slightly important.” _M_=2.50-3.49 interpreted as “important.” _M_=3.50-4.00 interpreted as “highly important.”

The highest rated item was the importance of saving money for the future which was rated as highly important by the respondents (_M_=3.59, _SD_=.53). The lowest rated item was learning correct procedures in crawfish farming in order to earn more money, which also was rated as highly important (_M_=3.57, _SD_=.61). The scale mean was 3.58 (_SD_=.61) which indicates that the respondents perceived that monetary earnings was highly important to them (Table 20).

**Comparison of Value Placed on Monetary Earnings by Ethnicity**

Inferential _t_-tests were used to compare the scale mean for Value Placed on Monetary Earnings by ethnicity. As Table 18 shows, Hispanic immigrant crawfish farm workers (_M_=3.85, _SD_=.26) valued monetary earnings more than the Caucasian U.S. citizens (_M_=3.52, _SD_=.53) (_t_ (125) = -2.91, _p_=0.004). The effect size according to the standards published by Cohen (1988) is 0.79 and is defined as medium.
Objective 5: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Value Placed on Career Plans

Objective 5 from the study included 3 questions that Caucasian U.S. citizen and Hispanic immigrant respondents employed on crawfish farm operations in Louisiana (N=127) responded to indicating values placed on career plans. These questions were:

19. How important is it to have a career plan (more than 5 years)?

20. How important is it to continue working in the same job for more than one year?

21. How important is it to have a job you enjoy?

Value Placed on Career Plans

The Value Placed on Career Plans Scale contained items 19-21 in the research instrument. This scale was used to assess the importance of having a career plan to the respondents in the study. Cronbach’s alpha was calculated to determine the reliability (internal consistency) of the scale. The Cronbach’s alpha for the scale was .87, which indicates that the scale possessed exemplary reliability according to the standards published by Robinson et al. (1991). These data are presented in Table 21.

Table 21. Item Answer Distribution Corresponding to Values Placed on Career Plans

<table>
<thead>
<tr>
<th>Statements</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important is it to continue working in the same job for more than one year?</td>
<td>127</td>
<td>3.44</td>
<td>.74</td>
</tr>
<tr>
<td>How important is it to have a career plan (more than 5 years)?</td>
<td>127</td>
<td>3.23</td>
<td>.81</td>
</tr>
<tr>
<td>How important is it to have a job you enjoy?</td>
<td>127</td>
<td>3.17</td>
<td>.85</td>
</tr>
<tr>
<td>Scale Mean Total</td>
<td>127</td>
<td>3.28</td>
<td>.80</td>
</tr>
</tbody>
</table>

Note. N=127 due to incompletion of items by respondents. Cronbach’s alpha coefficient for scale= 0.87. M=1.0-1.49 interpreted as “not important.” M=1.50-2.49 interpreted as “slightly important.” M=2.50-3.49 interpreted as “important.” M=3.50-4.00 interpreted as “highly important.”

The highest rated item was the importance to continuing to work in the same job for more than one year, which was rated as important (M=3.44, SD=.74). The lowest rated item was
importance of a job they enjoy, which was rated as important \((M=3.17, SD=.85)\). The scale mean was 3.28 \((SD=.80)\) which indicates that respondents perceived career plans as important (Table 21).

**Comparison of Value Placed on Career Plans by Ethnicity**

Inferential \(t\)-tests were used to compare the scale mean for Value Placed on Career Plans by ethnicity. Caucasian U.S. citizens placed a significantly higher value on career plans \((M=3.44, SD=.56)\) than the Hispanic immigrants \((M=2.60, SD=.87)\) \((t(125) = 5.90, p<0.001)\) (Table 18). The effect size according to the standards published by Cohen (1988) is 1.15 and defined as large.

**Objective 6: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Importance Placed on Working on Crawfish Farm Operations**

Objective 6 from the study included 5 questions that Caucasian U.S. citizen and Hispanic immigrant respondents employed on crawfish farm operations in Louisiana \((N=124)\) responded to indicating importance placed on working on crawfish farm operations. These questions were:

22. How important is it to follow correct procedures in order to complete your job on a crawfish farm?

23. How important is it for you to continue working on a crawfish farm next season?

24. How important is it to you that your child works on a crawfish farm in the future?

25. In your opinion, how important is it to follow safety rules at the crawfish farm?

26. How important is it that you become a manager or an owner of a crawfish farm?

**Importance Placed on Working on Crawfish Farm Operations**

The Importance Placed on Working on Crawfish Farm Operations Scale contained items 22-26 in the research instrument. This scale was used to assess the perceived importance of working on crawfish farm operations to the respondents in the study. Cronbach’s \(\alpha\) was
calculated to determine the reliability (internal consistency) of the scale. The Cronbach’s *alpha* for the scale was .86, which indicates that the scales possessed exemplary reliability according to the standards published by Robinson et al. (1991). These data are presented in Table 22.

Table 22. Item Answer Distribution Corresponding to Values Placed on Working on Crawfish Farm Operations

<table>
<thead>
<tr>
<th>Statements</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important is it to follow correct procedures in order to complete your job on a crawfish farm?</td>
<td>124</td>
<td>3.31</td>
<td>.66</td>
</tr>
<tr>
<td>In your opinion, how important is it to follow safety rules on the crawfish farm?</td>
<td>124</td>
<td>3.27</td>
<td>.72</td>
</tr>
<tr>
<td>How important is it for you to continue working on a crawfish farm next season?</td>
<td>124</td>
<td>2.92</td>
<td>1.11</td>
</tr>
<tr>
<td>How important is it that you become a manager or an owner of a crawfish farm?</td>
<td>124</td>
<td>2.70</td>
<td>1.20</td>
</tr>
<tr>
<td>How important is it to you that your child works on a crawfish farm in the future?</td>
<td>124</td>
<td>2.44</td>
<td>1.14</td>
</tr>
<tr>
<td>Scale Mean Total</td>
<td>124</td>
<td>2.93</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. *N*=124 due to incompletion of items by respondents. Cronbach’s *alpha* coefficient for scale= 0.86. *M*=1.0-1.49 interpreted as “not important.” *M*=1.50-2.49 interpreted as “slightly important.” *M*=2.50-3.49 interpreted as “important.” *M*=3.50-4.00 interpreted as “highly important.”

The highest rated item was the importance of following correct procedures in order to complete their job on the crawfish farm which was rated as important (*M*=3.31, *SD*=.66). The lowest rated item was the importance of becoming a manager or an owner of a crawfish farm which was rated as important (*M*=2.70, *SD*=1.20). The scale mean was 2.93 (SD=.96) which indicates that the respondents’ values placed on working on crawfish farm operations was important to them (Table 22).

**Comparison of Importance Placed on Working on Crawfish Farm Operations by Ethnicity**

Inferential *t*-tests were used to compare the scale mean for Value Placed on Working in Crawfish Farm Operations by ethnicity. Caucasian U.S. citizens (*M*=3.25, *SD*=.65) placed a
significantly higher value on working on crawfish farm operations than Hispanics ($M=2.08$, $SD=.67$) ($t(122) = 7.89, p<0.001$) (Table 18). The effect size according to the standards published by Cohen (1988) is 1.77 and is defined as large.

**Objective 7: Louisiana Caucasian U.S. Citizen and Hispanic Immigrant Crawfish Farm Workers’ Perceived Value of Migrant Farm Workers**

Objective 7 from the study included 4 questions that Caucasian U.S. citizen and Hispanic immigrant respondents employed on crawfish farm operations in Louisiana ($N=124$) responded to indicating perceived value of migrant farm workers. These questions were:

27. How important is it that migrant workers work on crawfish farms in the future?

28. How important are migrant workers to crawfish farms?

29. How important are migrant workers to agriculture?

30. How important are migrant workers to the economy of the United States?

**Value Placed on Migrant Workers**

The Value Placed on Migrant Workers Scale contained items 27-30 in the research instrument. This scale was used to assess the perceived value placed on migrant workers to the respondents in the study. Cronbach’s $\alpha$ was calculated to determine the reliability (internal consistency) of the scale. The Cronbach’s $\alpha$ for the scale was .97, which indicates that the scales possessed exemplary reliability according to the standards published by Robinson et al., (1991). These data are presented in Table 23.

The highest rated item was the importance of migrant workers to agriculture which was rated as important ($M=2.96$, $SD=.90$). The lowest rated item was the importance of migrant workers working on crawfish farms in the future ($M=2.80$, $SD=.97$). The scale mean was 2.86 ($SD=.96$) which indicates that the respondents perceived migrant workers as important (Table 23).
Table 23. Item Answer Distribution Corresponding to Values Placed on Migrant Workers

<table>
<thead>
<tr>
<th>Statements</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important are migrant workers to agriculture?</td>
<td>124</td>
<td>2.96</td>
<td>.90</td>
</tr>
<tr>
<td>How important are migrant workers to the economy of the United States?</td>
<td>124</td>
<td>2.86</td>
<td>.99</td>
</tr>
<tr>
<td>How important are migrant workers to crawfish farms?</td>
<td>124</td>
<td>2.82</td>
<td>.96</td>
</tr>
<tr>
<td>How important is it that migrant workers work on crawfish farms in the future?</td>
<td>124</td>
<td>2.80</td>
<td>.97</td>
</tr>
<tr>
<td>Scale Mean Total</td>
<td>124</td>
<td>2.86</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. $N=124$. Cronbach’s alpha coefficient for scale= 0.97. $M=1.0$-1.49 interpreted as “not important.” $M=1.50$-2.49 interpreted as “slightly important.” $M=2.50$-3.49 interpreted as “important.” $M=3.50$-4.00 interpreted as “highly important.”

Comparison of Value Placed on Migrant Workers by Ethnicity

Inferential $t$-tests were used to compare the scale mean for Value Placed on Migrant Workers by ethnicity. Hispanic immigrants ($M=3.90$, $SD=.29$) placed a higher value on migrant workers than Caucasian U.S. citizens working on crawfish farm operations ($M=2.61$, $SD=.83$). $t(122) = -7.49, p<0.001$ (Table 18). The effect size according to the standards published by Cohen (1988) is 1.27 and is defined as large.
CHAPTER 5: SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Purpose and Objectives

The summaries, conclusions, implications, and recommendations in this chapter are labeled as a direct comparison of data reported by the objectives in the study. Comparisons and conclusions are described as based on the review of literature and provide additional insight into reported data. The purpose of this study was to describe and compare personal characteristics, values placed on education, monetary earnings, career plans, working on crawfish farm operations, and perceptions of migrant worker value by Caucasian U.S. citizen and Hispanic immigrant crawfish farm workers in Louisiana. This study was developed to investigate values within the agriculture industry held by populations that have not been studied within the crawfish industry. The objectives used to guide this research were:

1. Describe and compare the demographic and personal characteristics of Louisiana crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants. The characteristics that were being compared are:
   a. Gender
   b. Ethnicity
   c. Age
   d. Number of years working in crawfish operations
   e. Educational attainment
   f. Country of citizenship
   g. Seasonal or permanent employee
   h. If crawfish farming is primary job
   i. If first year in the United States
2. Describe and compare the value placed on education in general by Louisiana crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants.

3. Describe and compare the value placed on education of children by Louisiana crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants.

4. Describe and compare the value placed on monetary earnings by Louisiana crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants.

5. Describe and compare values placed on career plans of Louisiana crawfish farm employees whether they are Caucasian U.S. citizens or Hispanic immigrants.

6. Describe and compare crawfish farm employees’ levels of importance related to working on a crawfish farm operation by whether they are Caucasian U.S. citizens or Hispanic immigrants.

7. Describe and compare crawfish farm employees’ perceptions of the value placed on migrant workers in the agriculture industry whether they are Caucasian U.S. citizens or Hispanic immigrants.

**Methodology**

The target population for this study was crawfish farm workers in Louisiana. The accessible populations was composed of Louisiana crawfish farm employees (N=4,844) of operations (N=1,211) that had contact information in the LSU AgCenter database and that were working on operations during December 2010 through February 2011. There were 130 respondents from 31 operations (65% participation rate) in the study consisting of 103 Caucasian U.S. citizens, 24 Hispanic immigrants, and 3 African American U.S. citizens.
The instrument used for this study was designed with Spanish and English to prevent potential illiteracy or confusion among workers who may only be able to read one language. The researcher developed the instrument and completed two pilot tests in order to check for validity and reliability among items used to address each objective in the study. The researcher administered the instrument through direct contact in order to increase participation and response rate as recommended by Dillman et al. (2009).

The instrument administered was designed to meet the objectives of the study. Items were developed by the researcher to obtain personal characteristics as well as to obtain levels of importance from respondents using a Likert type scale. Items were grouped together in the instrument as each aligned with specific objectives outlined in the study. Scale means were used from responses in order to analyze data as it related to individual ethnic groups.

Data were collected for the initial pilot study September 4, 2010 through September 16, 2010 with 35 total respondents. Because some items needed to be reworded, a second pilot test was completed from November 19, 2010 through November 30, 2010. After items were deemed reliable, data for the study was collected from January 3, 2011, through February 11, 2011, from 130 respondents. The researcher traveled to each participating operation (N=31) to administer instruments in person in order to ensure confidentiality of data and to increase participant response rate. Also, all data was collected as planned; therefore, no problems or conditions occurred that would inhibit data processing or skew results of the study. This data collection process yielded 130 valid instruments for analysis.

Summary of Findings

Objective One: Demographic and Personal Characteristics of Respondents

Objective one sought to describe and compare personal characteristics of crawfish farm employees in Louisiana. The personal characteristics identified were: gender, ethnicity, age,
number of years working in crawfish operations, educational attainment, country of citizenship, seasonal or permanent employee status, if crawfish farming is their primary job, and if this was the first year of residence in the United States for each respondent. A majority of the farm workers in Louisiana are Caucasian (79.20%), with a Hispanic immigrant population of 18.5%. The percentage of found Hispanic workers was higher than expected from the number of documented Hispanic workers reported by the U.S. Department of Agriculture Farm Service Agency of 8.6% (USDA-FSA, 2009). All of the participating Hispanic immigrant farm workers were male. The mean age of crawfish farm employees was 34.42 years, with Caucasian U.S. citizens mean age being 35.68 years, and (the mean age of ) Hispanics as younger at 29.00 years old.

A majority of the Caucasian U.S. citizen population of farm workers identified themselves as permanent farm workers (72.6%), while a majority of the Hispanic immigrant population reported as being temporary (79.2%). Of the respondents, the Caucasian U.S. citizen population spent the most number of years working in crawfish farm operations (9.95 mean years), while the Hispanic populations spent 1.88 mean years in crawfish farm operations.

In educational attainment, none of the Hispanic immigrant population had earned higher than a high school diploma or GED, whereas 13.6% of Caucasian U.S. citizens had earned an associate’s degree or higher. Therefore, the Caucasian U.S. citizens had a higher educational attainment than the Hispanic immigrant population. This high degree attainment of Caucasian U.S. citizens may be due to some workers being related to the manager and owner of the crawfish farm operation.

**Objective Two: Value Placed on Education in General**

Objective two sought to describe values placed on education in general and make the comparison between Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees in
Louisiana. The respondents rated Education in General as “important” with no significant difference found between the ethnic groups.

**Objective Three: Value Placed on Children’s Education**

Objective three sought to describe values placed on children’s education and make the comparison between Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees in Louisiana. The crawfish farm workers rates the Value Placed on Children’s Education as “important.” There was no significant difference found between perceived importance levels of children’s education by ethnic group.

**Objective Four: Value Placed on Monetary Earnings**

Objective four sought to describe values placed on monetary earnings and make the comparison between Caucasian U.S. citizen and Hispanic immigrant crawfish farm employees in Louisiana. The respondents rated monetary earnings as “highly important.” There was a significant difference found between Hispanics and Caucasian U.S. citizens in the variable monetary earning importance. Hispanic immigrants rated monetary earnings as significantly more important with a reported medium effect size as compared to the Caucasian U.S. citizen group.

**Objective Five: Value Placed on Career Plans**

Objective five sought to describe values placed on career plans and make the comparison between Caucasian U.S. citizen and Hispanic crawfish farm employees in Louisiana. The respondents rated the Value Placed on Career Plans as “important.” There was a significant difference with a large effect size found between Hispanic immigrants and Caucasian U.S. citizens. The Caucasian U.S. citizen crawfish farm worker population reported having a career plan as highly important, whereas the Hispanic crawfish farm worker population placed having a career plan as important. Therefore, Caucasian U.S. citizens place a higher value on having a career plan than their Hispanic counterparts working on crawfish farm operations in Louisiana.
Objective Six: Desire to Continue Working on Crawfish Farm Operations

Objective six sought to describe the employees’ desire to continue working on crawfish farm operations. The employees rated their desire to continue working on crawfish farm operations as “important.” There was a significant difference with a large effect size found between Caucasian U.S. citizen and Hispanic crawfish farm workers. The Caucasian U.S. citizen respondents indicated a rating of “important”, and Hispanics indicated a “slightly important” rating for their desire to continue working on crawfish farm operations. Therefore, Caucasian U.S. citizens indicated a higher desire to work on crawfish farm operations than their Hispanic counterparts.

Objective Seven: Value Placed on Migrant Workers

Objective seven sought to describe the perception of values placed on migrant workers. The crawfish farm workers rated the Value Placed on Migrant Workers as “important.” There was a significant difference with a large effect size found between Caucasian U.S. citizen and Hispanic crawfish farm workers. The Hispanic population indicated a “high importance” on migrant workers, and Caucasian U.S. citizens labeled migrant workers as “important.”

Conclusions

The conclusions were based on the objectives of the study and were derived from information obtained from respondents in the study and add to the body of knowledge found through an extensive review of literature. The conclusions are presented in order by research objective. The conclusions are stated in **bold font** followed by a discussion of how the conclusion relates to existing research literature.

Conclusion One

**Hispanic immigrants are younger and have lower educational attainment than Caucasian U.S. citizens working on crawfish farms in Louisiana.** Kandel reported that a
large percentage of the Hispanic population entering the United States lack education when compared to the Caucasian U.S. citizen population in similar industries (2004). This study confirms Kandel’s findings and conclusions that many Hispanic migrants come to the United States with limited education. Kandel (2004) also reported a correlation between educational achievement and poverty gaps found among ethnic groups. The findings from this study support the conclusions related to educational attainment when compared to Hispanic crawfish farm workers in Louisiana.

Conclusion Two

Both Hispanics and Caucasian U.S. citizens working in crawfish farm operations in Louisiana view education in general as important. Vega and Sribney (2009) stated that educational achievement has grown as an important factor of accomplishment for Hispanic workers in the United States. In addition, as the gap related to education is realized, both ethnic groups should view educational achievement as equally important (Altschul, Oysermann, & Bybee, 2088). This study supports the conclusions that as populations work with each other, the ideals related to education will become more closely related as a definition of the Assimilation Theory (Alba, 1997; Johnson & Marchi, 2010).

Conclusion Three

Both Hispanics and Caucasian U.S. citizens working on crawfish farm operations in Louisiana view their children’s education as important. This educational importance found in the study supports conclusions stated by Batalova and Lowell (2007) who indicated that the educational success of children is directly influenced by the ideals of parents. Also, Vega and Sribney indicated that educational success has continually grown as a primary objective for Hispanic migrants (2009). Results from this study support the high importance placed on education in general and the high importance on their children’s education by both ethnic groups.
Conclusion Four

Monetary earnings are more important for Hispanic immigrants than Caucasian U.S. citizens on crawfish farm operations in Louisiana. Borre, Ertle, and Graff (2010) reported that many Hispanics choose to come from their home countries to escape poverty and to increase monetary earnings through alternative employment (which is usually in agriculture or construction). According to the human capital theory (Borjas, 1982; Hass, 2010; Wood, 2010), populations will tend to migrate to areas where the source of income is significantly greater. None of the Hispanic workers in Louisiana’s crawfish farm operations indicated this as their first year in the United States, suggesting immigrant status as opposed to being migrant workers who commute from Mexico on a yearly basis (Hass, 2010). Borjas (1982) also indicated that Hispanics coming from Mexico tend to have greater opportunities for increased monetary gain by entering the United States for employment and remaining for extended periods of time. This study supports Borjas’ conclusions related to the value of monetary importance as reported by the Hispanic population of crawfish farm workers. Both the Hispanic population and the Caucasian U.S. citizen population indicated a high importance for monetary values. Therefore, Hispanics from Mexico may be more willing to remain in crawfish farming if the monetary earnings were suitable to warrant remaining in the industry as opposed to entering another industry (Rochin, 1999). It is a plausible conclusion that monetary importance to immigrant workers may be a contributing factor related to the low number of years in crawfish farm employment reported by the Hispanic population. The Hispanic crawfish farm workers may use the employment opportunities on crawfish farms to migrate to the U.S. and remain as immigrants.

Conclusion Five

Career plans are more important for Caucasian U.S. citizens than Hispanic immigrants working on crawfish farms in Louisiana. According to Kandel (2004), many
Hispanic immigrants are settling in the rural parts of the United States as employment opportunities arise; however, in many instances, these immigrants are also undocumented and may not desire to take appropriate steps to become documented due to government mistrust (Dyckman, 2002). Therefore, it is a plausible conclusion that career plans may not be perceived as important to Hispanic immigrants as they are to Caucasian U.S. citizens due to the supported conclusions of studies, which stated that mistrust between Hispanic immigrants in the United States and government officials was problematic.

Conclusion Six

**Caucasian U.S. citizens have a higher desire to continue working on crawfish farms in Louisiana than Hispanic immigrants.** Martin (2002) indicated a need to address the aging population of farm owners and laborers across the United States. Although the Caucasian population indicated a significantly higher importance of continuing to work on crawfish farm operations, both populations indicated a rating of “important” or higher to continue working on crawfish farming operations in the future. The average age of farm owners, as reported by Martin (2002), is 55 years old. Martin also reported the average age of farm workers as under 35 years old, which is also in agreement with the results found in this study. This study reported the average age of U.S. Caucasian farm workers as 35.9 years and the average age of Hispanic farm workers as 29.0 years old. Therefore, a source of potential future farm management may come from this relatively younger population of crawfish farm laborers in the agriculture industry in Louisiana.

Conclusion Seven

**Hispanic immigrants place a higher importance on migrant workers in the agriculture industry than Caucasian U.S. citizens working on crawfish farms in Louisiana.**
The presence of Hispanic migrant workers has been common in the agriculture industry for many years (Martin, 2002); however, there has been a reduction in the number of Hispanic migrant workers and an increase in the number of undocumented Hispanic immigrants due to the strengthening of border security along the Mexico-United States border (McKinnon, 2006). Because the Hispanic immigrants working on crawfish farms in Louisiana are from Mexico and the researcher could not confirm documentation status of respondents, it is a plausible conclusion that the Hispanic immigrant populations may have placed a higher importance on migrant workers as an indication of their own hope for future employment in the crawfish farming industry.

**Implications and Recommendations**

Recommendations are most applicable for educational institutions and extension services as they strive to improve programs that are designed to reach populations of farm workers as well as to address the gaps found between Hispanics and U.S. Caucasians in relation to educational attainment and income. Educational faculty should increase program outreach that would include newly developing regions that are including more Hispanics as a growing population (Hobbs, 2004). Educational programs could also be used to increase program awareness and increase participation and assimilation rates in regions where ethnic segregation voluntarily occurs due to misconceptions between cultures and ethnic groups, where educational values are concerned (Martinez-Espinoza, 2003).

With an increased interest related to diversity in educational settings and the growing number of Hispanics moving into rural regions as permanent residents, it is important for extension services to reach out to this growing population and encourage more involvement among Hispanic immigrant workers as well as younger workers who may come into management within crawfish farm operations (Remble, 2010). Because crawfish farm managers
are aging, it is important for Caucasian U.S. citizens to move into management more than for Hispanic immigrants; however, Hispanic immigrants can be a potential source for farm leadership if educational programs could be put in place to assist these potential farm workers to have an opportunity to manage farm operations. Also, working with the current Caucasian U.S. citizens to encourage cooperation among all workers could develop programs that would encourage a higher perception of importance of farm workers who may perceive immigrant workers as job threatening as opposed to a potential source for expanding workforce.

If educational entities were to encourage the growing populations of Hispanic farm workers to be included in educational programs, a potential leadership group in the crawfish farm industry could rise from this population that is currently defined as vulnerable (Mazonni et al., 2007). Differences existed between Hispanic immigrants and Caucasian U.S. citizens as to the level of importance placed on migrant workers as well as the desire to continue to work in crawfish farm operations. These differences may be addressed through educational and extension outreach programs that more closely involve cooperation between these groups (O’Sullivan. 2000).

In order for educational entities to respond to the growing population of Hispanics in many rural areas, including Louisiana, it is important to provide services to this population. By offering educational services, the rate of assimilation in these regions can be increased.

Also, by offering educational services to the crawfish farm worker community, cooperation between educational entities and crawfish farm employees can potentially lead to better working environments, higher wages from an increased desire to succeed, and a future where they manage crawfish farm operations themselves; thus satisfying the need for higher income as stated by the theory of human capital.
Recommendations for Further Research

Several questions need to be answered in future studies. Why is having a career plan deemed more important for Caucasian U.S. citizens than Hispanic immigrants and monetary earnings are rated as having higher importance for the Hispanic immigrant worker population? Is there a perceived correlation between monetary earnings and having a career plan? Why is there a difference in rated importance of migrant workers in agriculture between Hispanic immigrants and Caucasian U.S. citizens? Why are there so few African American employees working in crawfish farm operations?

Studies are needed to get a more specific explanation as to the differences found between ethnic groups and the values placed on many aspects of crawfish farming. One area is the difference between values placed on migrant workers and the low importance rating from Caucasian U.S. citizen employees when compared to the Hispanic immigrants. This study has shown that much more research is needed to discover possible reasons why differences in importance values exist between the Hispanic immigrant and Caucasian U.S. citizen populations. Specifically, when developing future studies to address the populations of Hispanics in the future, information related to marital status as well as family structures (number of children as well as the location of spouses) would benefit the development of educational programs in extension related to agriculture.

The study found very low numbers of African American respondents to the survey instrument. Studies should also be completed to discover potential reasons why there are so few African Americans employed in crawfish farm operations when compared to Caucasian U.S. citizens and Hispanic immigrants. These studies could also center on the comparison of the surrounding community demographics as compared to the actual farm labor. Discoveries found
that can provide potential conclusions or further insight into the educational aspirations of crawfish farm employees will better assist all educational entities with the development of programs that can serve future generations of agriculture employees in Louisiana.
REFERENCES


Montero-Sieburth, M. (2007). The roles of leaders, community and religious organizations, consular relationships, and student groups in the emerging leadership of Mexican


APPENDIX A: COVER LETTER AND SURVEY INSTRUMENT

Thank you for taking the time to complete this survey,

Please answer the following questions about your education, career goals, experience, and expectations related to crawfish farming.
By completing this survey you agree to participate in this study. The information obtained by this survey will help educators to develop programs that can help the entire agriculture industry. All information from this survey will remain confidential.
Thank you for responding.

Gracias por tomarse el tiempo para llenar esta encuesta,
Por favor conteste las siguientes preguntas sobre su educación, metas profesionales, experiencia y expectativas relacionadas a las granjas de cangrejo de río.
Al completar esta encuesta, usted se compromete a participar en este estudio. La información obtenida en este estudio ayudará a los maestros en el desarrollo de programas que puedan ayudar a toda la industria. Toda la información de esta encuesta será confidencial. Gracias por responder.

Thank you,
Gracias,

Richard Johnson
1373 Caffey Rd.
Rayne, LA 70578

Note: Your privacy will be maintained and your responses will be kept confidential. You will not be identified in any way in research reports or presentations. By completing and returning the enclosed survey, you agree to participate in the study. If you have questions about your rights as a study participant or other concerns, contact Robert C. Mathews, Institutional Review Board Chairman, 203 B-1 David Boyd Hall, Louisiana State University, Baton Rouge, LA 70803. (225) 578-8692. (Project 2008-4296)

Nota: Su privacidad y sus respuestas se mantendrán confidenciales. Usted no será identificado de ninguna manera en los informes de investigación o presentaciones. Al completar y devolver la encuesta adjunta, usted se compromete a participar en el estudio. Si usted tiene preguntas acerca de sus derechos como participante en el estudio u otras preocupaciones, Contacte con Robert C. Mathews, Presidente de la Junta de Revisión Institucional, 203 B-1 David Boyd Hall, Universidad Estatal de Louisiana, Baton Rouge, LA 70803. (225) 578 a 8692. (Project 2008-4296)
Age: ________________

Gender: ___ Male ___ Female (√ one)

Ethnicity (√ one):
- __ Caucasian/white
- __ Hispanic
- __ African American
- __ Asian
- __ Other (Please specify): _______________________

Country of Citizenship (√ one):
- __ USA
- __ Mexico
- __ Columbia
- __ El Salvador
- __ Other (Please specify): _______________________

Highest level of Education Completed (√ one):
- __ Less than middle school attendance
- __ Attended middle or high school
- __ High school diploma or GED certificate
- __ Associate degree from community or technical college
- __ Bachelor’s or graduate degree

Please answer the following questions:

1. How many years have you worked on a crawfish farm? _____________ years.
   ¿Cuántos años lleva trabajando en una granja de cangrejo de río?
2. Is crawfish farming your primary job?
   *Es la granja de cangrejo de río su principal trabajo?*
   
   ___Yes   ___No (√ one)
   
   Si          No (√ una)

3. Are you a permanent crawfish farm employee?
   *¿Es un empleado permanente en la granja de cangrejo de río?*
   
   ___Yes   ___No (√ one)
   
   Si          No (√ una)

4. Is this your first year in the United States?
   *¿Es su primer año en Estados Unidos?*
   
   ___Yes   ___No (√ one)
   
   Si          No (√ una)

---

### Expectations related to educational/career goals

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<th>2</th>
<th>3</th>
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<td>12. How important is it for your child to complete high school?</td>
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<td>13. How important is it for your child to complete a bachelor’s degree?</td>
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<td>14. How important is it for your child to earn money to help provide for the immediate family?</td>
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<tr>
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<td>How important is educational achievement if someone wants to make more money?</td>
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<tr>
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<td>¿Cuán importante es la educación si alguien quiere hacer más dinero?</td>
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<td>¿Cuán importante es el dinero en su decisión de trabajar en una granja de cangrejo de río?</td>
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<td>3</td>
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<tr>
<td>17.</td>
<td>How important is it for you to learn correct procedures in crawfish farming in order to earn more money?</td>
<td>1</td>
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<tr>
<td></td>
<td>¿Cuán importante es para usted aprender los procedimientos correctos en las granjas de cangrejos de río con el fin de ganar más dinero?</td>
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<td>¿Cuán importante es ahorrar dinero para el futuro?</td>
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<tr>
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<td>¿Cuán importante es para usted tener planes profesionales (por más de cinco años)?</td>
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<td>¿Cuán importante es continuar trabajando en el mismo trabajo por más de un año?</td>
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<tr>
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<td>¿Cuán importante es tener un trabajo que usted disfrute?</td>
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<tr>
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<td>3</td>
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<tr>
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<td>¿Cuán importante es seguir los procedimientos correctos a fin de completar su trabajo en las granjas de cangrejo de río?</td>
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<td>How important is it for you to continue working on a crawfish farm next season?</td>
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<tr>
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<td>¿Cuán importante es para usted seguir trabajando en una granja de cangrejo de río siguiente temporada?</td>
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<td>3</td>
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<tr>
<td>24.</td>
<td>How important is it to you that your child works on a crawfish farm in the future?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td></td>
<td>¿Cuán importante es para usted que su hijo trabaje en una granja de cangrejo de río en el futuro?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>25.</td>
<td>In your opinion, how important is it to follow safety rules at the crawfish farm?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td></td>
<td>En su opinión, ¿Cuán importante es seguir las normas de seguridad en la granja de cangrejo de río?</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Expectations related to educational/career goals</td>
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<tr>
<td>-----------------------------------------------</td>
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<tr>
<td><strong>Expectativas relativas a objetivos educativos/metas profesionales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. How important is it that you become a manager or an owner of a crawfish farm?</td>
<td>1</td>
<td>2</td>
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<tr>
<td>¿Cuán importante es llegar a ser administrador o propietario de una granja de cangrejo de río?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>27. How important is it that migrant workers work on crawfish farms in the future?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>¿Cuán importante es que trabajadores migrantes trabajen en una granja de cangrejo de río en el futuro?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. How important are migrant workers to crawfish farms?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>¿Cuán importantes son los trabajadores migrantes para las granjas de cangrejo de río?</td>
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<tr>
<td>29. How important are migrant workers to agriculture?</td>
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<td>4</td>
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<tr>
<td>¿Cuán importantes son los trabajadores migrantes para la agricultura?</td>
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<td></td>
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<tr>
<td>30. How important are migrant workers to the economy of the United States?</td>
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<td>2</td>
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<td>4</td>
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<tr>
<td>¿Cuán importantes son los trabajadores migrantes para la economía de los Estados Unidos?</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
APPENDIX B: SCRIPT USED TO ADDRESS CRAWFISH FARM EMPLOYEES

“My name is Richard Johnson and I am the aquaculture agent with the LSU Agricultural Center in Rayne. I need your help. The LSU Agricultural center develops programs to serve the crawfishing industry. The best way for us to develop programs that meet your needs is to find out about your needs and goals. I am asking you to help us to develop programs for the crawfishing industry by taking about 10 minutes to complete a short survey. It is important that you answer every question. Your help will be greatly appreciated and any information you provide will be confidential. After you finish the survey, please place it in the drop box (point or motion to where dropbox is located). Thank you for your help and I will be glad to answer any questions.”

"Mi nombre es Richard Johnson y soy agente de acuicultura en conjunto con el Centro Agrícola de la LSU en Rayne. Necesito su ayuda. El Centro Agrícola de la LSU desarrolla programas para servir a la industria del cultivo de cangrejo de río. La mejor manera para desarrollar programas que satisfagan sus necesidades es conocer sus necesidades y objetivos. Yo estoy pidiendo que nos ayude a desarrollar programas para la industria del cultivo de cangrejo de río tomando unos 10 minutos para completar una breve encuesta. Es importante que conteste todas las preguntas. Su ayuda será muy apreciada y cualquier otra información que usted proporcione será confidencial. Una vez finalizada la encuesta, por favor colóquela en el buzón (punto o moción donde se encuentre el buzón). Gracias por tu ayuda y estaré encantado de responder a cualquier pregunta."
APPENDIX C: INSTITUTIONAL REVIEW BOARD APPROVAL DOCUMENT

Application for Exemption from Institutional Oversight

Unless justified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/ projects involving human subjects, samples, or data obtained from humans, directly or indirectly with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

- Applicant, please fill out the application in its entirety and include the completed application as attached, parts A-E, listed below, when submitting it to the IRB. Once the application is completed, please submit two copies of the completed application to the IRB office or the member of the Human Subjects Screening Committee. Members of this committee can be found at http://www.lsu.edu/screeningcommittees.html.

- A complete application includes all of the following:
  (A) Two copies of this completed form and two copies of part B thru.
  (B) A brief project description adequate to evaluate risks to subject and to explain your responses to Parts 162.
  (C) Copies of all instruments to be used.
  * If this proposal is a grant proposal, include a copy of the proposal and all related materials.
  (D) The consent form that you will use in the study (see part 3 for more information).
  (E) Certificate of Completion of Human Subjects Protection Training or all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: http://ohiohltaining.com/users/login.php.

1) Principal Investigator: Richard Dean Johnson II
   Dept: SU AgCenter/AquaPh
   Ph: 337-788-4060
   E-mail: rjohnson@agctr.lsu.edu

2) Co-investigator(s) please include department rank, phone, and e-mail for each.
   Ph.D. Committee Chair, Dr. Joe W. Kotkisi, J.C. Atkinson Alumni Professor
   LSU School of Human Resource Education & Workforce Development
   kotkisi@lsu.edu 8-5753

3) Project Title: A Comparison of Career and Education Aspirations and Expectations Between Hispanic Immigrant and Caucasian U.S. Citizen Employees of Louisiana Crawfish Farms

4) Proposal? (yes or no) [ ]
   [ ] If Yes, LSU Proposal Number
   [ ] Also, if yes, either
   [ ] This proposal completely matches the scope of work in the grant
   [ ] More IRB applications will be filed later

5) Subject pool (e.g. Psychology students) [ ] Louisiana adult crawfish farm managers/owners and employees
   *Circle any "vulnerable populations to be used: (children <18; the mentally involved, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

6) MT signature [ ] Date [ ]
   [ ] (no MT signatures)

** I certify my responses are accurate and complete. If the project scope or design is later changed, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions involved in the study. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time, the consent forms should be preserved in the Department Office.

Screening Committee Action: Exempted [ ] Not Exempted [ ] Category/Paragraph
   Reviewer [ ] Signature [ ] Date [ ]

Part 1: Determination of "Research" and Potential For Risk

This section determines whether the project meets the Department of Health and Human Services (HHS) definition of research involving human subjects, and if not, whether it nevertheless presents more than minimal risk to human subjects that makes IRB review prudent and necessary.
APPENDIX D: SYNTAX FOR STATISTICAL ANALYSIS FOR FIRST PILOT TEST

COMPUTE EdValue=(v5+v6+v7+v8+v9+v10+v11+v12+v13)/9.
COMPUTE Monetary=(v14+v15+v16+v21)/4.
COMPUTE CareerG=(v17+v18+v19)/3.
COMPUTE CrawMgt=(v22+v23+v23+v25+v26)/5.

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DESCRIPTIVES VARIABLES=All.
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/CRITERIA=CI(.95).
APPENDIX F: SYNTAX FOR STATISTICAL ANALYSIS OF STUDY DATA

COMPUTE Education=(v5+v6+v7+v8+v9)/5.
COMPUTE ChildEd=(v10+v11+v12+v13+v14+v15)/6.
COMPUTE Money=(v16+ v17+ v18)/3.
COMPUTE Job=(v19+ v20+ v21)/3.
COMPUTE CrawFarm=(v22+v23+v23+v25+v26)/5.
COMPUTE Migrants=(v27+v28+v29+v30)/4.
FREQUENCIES VARIABLES=All
/STATISTICS=STDDEV MEAN MEDIAN SKEWNESS SESKEW KURTOSIS SEKURT
/OPTION=ANALYSIS.
DESCRIPTIVES VARIABLES=All.
RELIABILITY
/VARIABLES=v5 v6 v7 v8 v9
/SCALE('ImpOfEd') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
RELIABILITY
/VARIABLES=v10 v11 v12 v13 v14 v15
/SCALE('ImpOfChildEd') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
RELIABILITY
/VARIABLES=v16 v17 v18
/SCALE('ImpOfMoney') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
RELIABILITY
/VARIABLES=v19 v20 v21
/SCALE('ImpOfJob') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
RELIABILITY
/VARIABLES=v22 v23 v24 v25 v26
/SCALE('WorkOnCrFarm') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
RELIABILITY
/VARIABLES=v27 v28 v29 v30
/SCALE('ImpImmigrants') ALL
/SCALE=ALPHA
/STATISTICS=DESCRIPTIVE SCALE
/SUMMARY=TOTAL.
T-TEST GROUPS=Ethnic(0 1)
/MISSING=ANALYSIS
/VARIABLES=Age Years Education ChildEd Money Job CrawFarm Migrants
/CRITERIA=CI(.95).
Select if (ethnic<2).
CROSSTABS
/TABLES=Gender Primary Seasonal FirstYr BY Ethnic
/FORMAT=AVVALUE TABLES
/STATISTICS=CHISQ PHI
/CELLS=COUNT EXPECTED ROW COLUMN TOTAL
/COUNT ROUND CELL.
Use All.
recode Educ (0=1) (1=1) (2=2) (3=3) (4=3) into Educ2.
recode country (0=0) (1=1) (2=2) (3=3) (4=9) into country2.
CROSSTABS
/TABLES=Educ2 Country2 BY Ethnic
/FORMAT=AVVALUE TABLES
/STATISTICS=CHISQ PHI
/CELLS=COUNT EXPECTED ROW COLUMN TOTAL
/COUNT ROUND CELL.
Use ALL.
VITA

Richard Johnson II is the son of Richard and Debra Johnson. He was born in Urania, Louisiana, on August 20, 1981, and was raised in Winnfield, Louisiana. Richard graduated from Winnfield Senior High School in 1999, where he was an active member in the local FFA chapter and obtained his state FFA degree in 1998.

Richard earned his Bachelor of Science degree in general agriculture from McNeese State University in 2003. He earned his educator certification in agriculture education and various sciences from the University of Louisiana at Lafayette in 2005. Richard continued his education at McNeese State University, earning his Master of Science degree in December 2007 in environmental and chemical sciences with a concentration in agriculture.

Richard began his professional career teaching chemistry and physics in Calcasieu parish in 2005. He joined the LSU AgCenter in 2007 as an assistant area extension agent specializing in aquaculture.