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An examination of the effectiveness of the  
Louisiana GEAR UP program in promoting self-  
efficacy, improving academic achievement and  
increasing teachers' aspirations for their students

Candi Hill

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**AN EXAMINATION OF THE EFFECTIVENESS OF THE  
LOUISIANA GEAR UP PROGRAM IN PROMOTING  
SELF-EFFICACY, IMPROVING ACADEMIC  
ACHIEVEMENT AND INCREASING  
TEACHERS' ASPIRATIONS  
FOR THEIR STUDENTS**

by

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A Dissertation Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

COLLEGE OF EDUCATION  
LOUISIANA TECH UNIVERSITY

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We hereby recommend that the dissertation prepared under our supervision  
by Candi Hill

entitled An Examination of the Effectiveness of the Louisiana Gear Up Program in  
Promoting Self-Efficacy, Improving Academic Achievement and Increasing  
Teachers' Aspirations for their Students

be accepted in partial fulfillment of the requirements for the Degree of  
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## **ABSTRACT**

Students are likely to avoid academic pursuits if they lack academic self-efficacy (Bandura, 2000). Furthermore, past poor academic performance contributes to the development of low academic self-efficacy. Students who participate in extracurricular activities, like LA GEAR UP, demonstrate better academic achievement and less risk-taking behaviors than non-participating students (Barber, Stone, & Hunt, 2003). Research supports the notion that LA GEAR UP is an effective way to improve students' academic performance and to reduce the number of disciplinary referrals students receive (Beer, 2009). Additionally, within the academic literature research has demonstrated that teachers' attributions about students are based upon their perceptions about students' effort and ability (Clark, 1997; Reyna & Weiner, 2001).

Participants included 733 at-risk middle school and high school students enrolled in the 8<sup>th</sup> and 9<sup>th</sup> grades. The Multidimensional Scale of Perceived Self-efficacy was used to measure self-efficacy, a survey utilized by the Board of Regents was utilized to obtain information about suspensions and expulsions and a question about teachers' aspirations was utilized. It was hypothesized that students who participated in LA GEAR UP activities would have higher self-efficacy, higher GPA, and fewer disciplinary referrals than students who did not participate. Furthermore, it was hypothesized that teachers would have higher aspirations for participating students than for non-participants.

The findings of this study were that after camp, students who participated in LA GEAR UP had significantly higher academic self-efficacy and GPA than students who

did not attend camp. That is, there was a statistically significant difference between mean self-efficacy scores and GPA for students who attended camp and students who did not attend camp. Further, there were no statistically significant differences in students' mean self-efficacy scores and GPAs prior to camp. Students who participated in more activities had increases in their self-efficacy and GPA. Additionally, teachers' aspirations for students were positively impacted by increased exposure to LA GEAR UP activities. These findings are relevant because they support the idea that LA GEAR UP is a beneficial program that promotes psychological growth and positive behavioral change in students. Future research should determine which specific aspects of LA GEAR UP contribute most to the development of high self-efficacy. Such research would enable program modifications that emphasize those aspects of the program that contribute most to the development of improved academic self-efficacy.

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Author Candi L Hill  
Date 12-6-13

## **DEDICATION**

This dissertation is dedicated to Dr. Mary Ann Goodwyn, a woman who followed and supported me throughout my educational journey. Despite illness and trials, she labored over this work and invested in my future. I am forever grateful that I had the opportunity to know and work with such an incredibly dedicated educator.



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## **CHAPTER ONE**

### **INTRODUCTION**

"Self-belief does not necessarily ensure success, but self-disbelief assuredly spawns failure" (Bandura, 1997, p. 77). Upon reaching adolescence, young people must begin to make decisions about their future. An important decision for many of them is whether or not they should attend college (Galotti & Mark, 1994). Self-efficacy may be one of the most influential variables in the decision making process. Bandura (1982) defined self-efficacy as a person's perceptions about his or her capability to perform a specific task. Such perceptions of ability regulate individuals' behaviors throughout their lives. According to Bandura (2000), people who do not believe that they are able to achieve a goal will have little motivation to work toward accomplishing the goals. Instead, they tend to avoid setting lofty goals or attempting tasks that they do not believe they can effectively perform. Self-efficacy is a dynamic construct that changes as new information is gained (Gist & Mitchell, 1992). Perceived self-efficacy can be altered through direct mastery experiences, social-comparative information conveyed through vicarious experiences, social persuasion, attributional evaluations, and receiving proffered incentives (Bandura, 1994).

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is one of many programs developed in an attempt to increase the likelihood that



at-risk students will attend college. The program provides students with opportunities to experience academic success; meet peers who are succeeding academically, interact with teachers who believe they are capable of succeeding, and receive rewards, such as scholarships, as a result of their hard work (Louisiana Department of Education, 2009).

Such programs have been found to increase students' aspirations, college knowledge, and academic preparation in 10<sup>th</sup> grade students (Watt, Huerta, & Lozano, 2007).

Advancement Via Individual Determination (AVID) is a similar program that was developed to assist students from low income families, who are the first in their family to attend college (Watt et al., 2007). Fifty-five percent of African American students who participate in AVID go on to attend college compared to a national average of 33% of African American students who do not participate. Not only are students more likely to attend college, they are more likely to complete college than non-attending students (Jurich & Estes, 2000).

Students who feel that they have a high level of personal and community support, such as the support offered by GEAR UP, have higher academic aspirations and are more likely to believe that higher educational achievement leads to more financial attainment (Jackson, Kacanski, Rust & Beck, 2006). GEAR UP and other programs have the core goals of helping students attain academic success and attend college (Clancy & Miller, 2009). Academic success is often operationally defined as a high GPA and/or college attendance and graduation. Findings from a meta-analysis by Robbins, et al. (2004) suggest that self-efficacy is the best predictor of GPA.

## LA GEAR UP

GEAR UP is a federally funded program that was designed to improve the rate of college attendance for students living in low socioeconomic status areas and to help parents to become involved in their children's academic lives (Louisiana Department of Education, 2009). In 2003, the GEAR UP program in Louisiana began a college savings plan that awarded students scholarship money based on the total number of points they earned by participating in LA GEAR UP programming, performing well academically, and performing service activities during an academic year. In order to meet federal standards and to continue receiving federal grants, the program must apply for grants annually. Grants are competitive in nature, and require that the programs demonstrate their effectiveness.

The effectiveness of GEAR UP was supported when Watt et al. (2007) found that GEAR UP students from California had higher academic aspirations and more knowledge about the college application process than students who had not participated in GEAR UP. In their study, the researchers measured educational aspirations, expectations, anticipations, knowledge of college entrance requirements, knowledge of financial aid, and academic achievement in mathematics of students participating in AVID and GEAR UP. They found that both AVID participants and GEAR UP participants experienced increased aspirations and college knowledge.

The program was further supported in a final report published by the United States Department of Education (2008). Researchers measured academic performance and preparation for postsecondary education of GEAR UP students; rate of high school graduation and enrollment in postsecondary education of GEAR UP students; and GEAR

UP students' and their families' knowledge of postsecondary education options, preparation, and financing as part of an annual performance evaluation and found that students who attended GEAR UP programs attempted more challenging coursework than students who did not participate in GEAR UP and their parents had higher academic aspirations for them than did parents of non-participating students.

In order to continue receiving grant money for GEAR UP, the program must meet specific standards (Louisiana Department of Education, 2009). GEAR UP provides services to a cohort of middle school students, or all students in a grade, and continues those services for that cohort of students throughout all of high school. In order to maintain federal grant funding, programs must provide parents and students with information about the college application process, provide students with individualized academic support, encourage parent involvement, strive for educational excellence, promote school reform, and encourage student participation in rigorous courses. Although the over-arching goals are the same across programs, implementation can vary among programs.

Louisiana GEAR UP (LA GEAR UP) is a Board of Regents grant-funded program designed to prepare students from marginal socioeconomic areas of Louisiana for undergraduate college programs. One component of the LA GEAR UP program is the Summer Learning Camp held for 8<sup>th</sup>-10<sup>th</sup> grade students each summer, conducted at each of four universities across the state of Louisiana: Louisiana Tech University, Grambling State University, The University of Louisiana at Monroe, and Nicholls State University (Louisiana Systemic Initiatives Program, 2010). Each year, each university that hosted a camp chose one or more themes for that summer. For example, during the 2010 summer

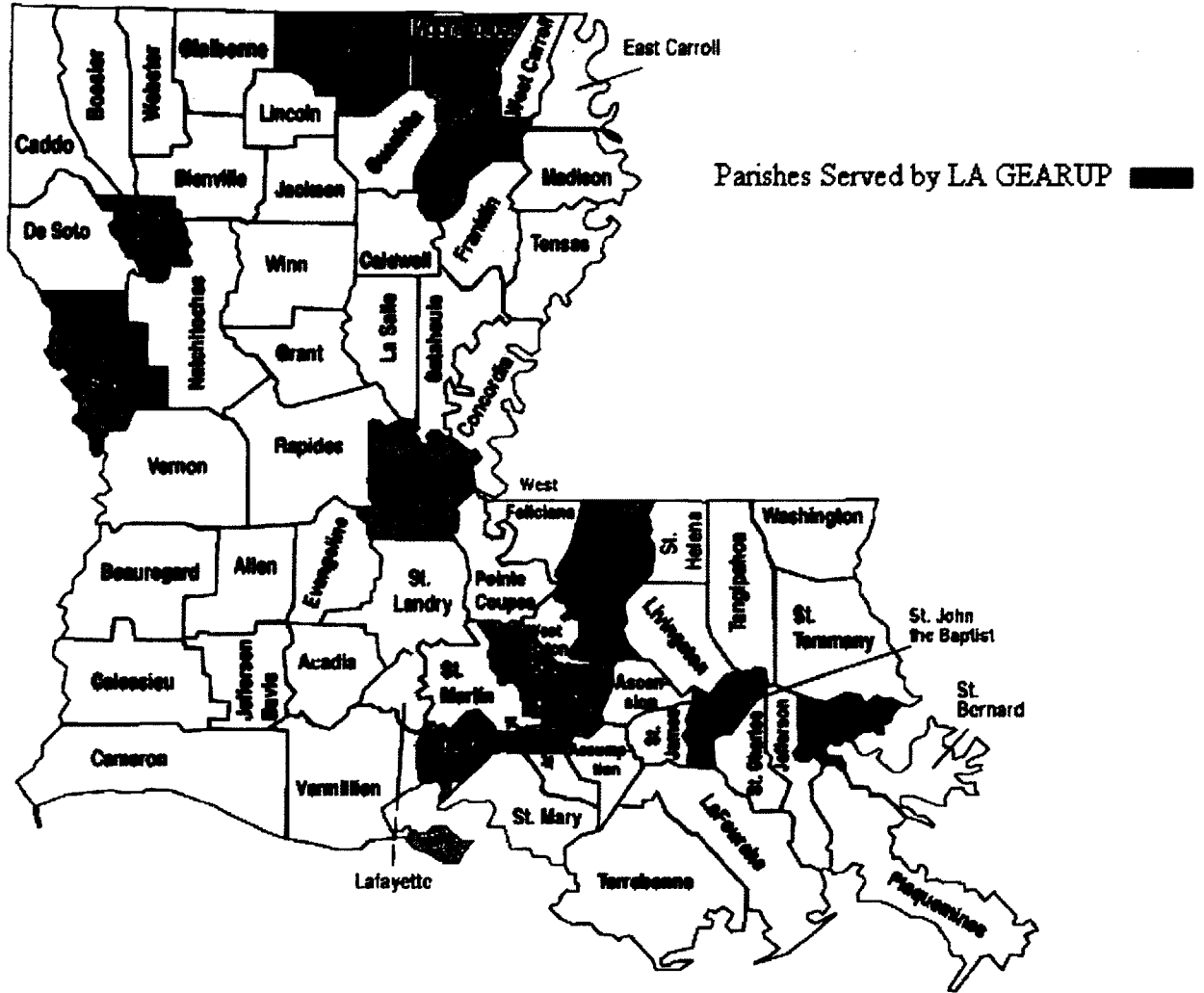
camps, themes included Crime Scene Investigation, Engineering, Sports Medicine, Space Exploration, Culinary Arts, Geospatial Technology, Coastal Marine Science, and other math and science topics.

Academic deficits in junior high and high school students are common in Louisiana (Beer, 2009). There were 61 schools labeled “at risk” participating in LA GEAR UP at the outset of this study. Eligibility criteria for participating schools specified by the state of Louisiana were that at least 59% of the student body were eligible for free or reduced lunch, and the average composite ACT score from students at the schools must have been  $\leq 19.6$ . Fewer than 42.7% of the state’s first-time college freshmen reported graduating from these schools each year and 45.6% or more college freshmen who reported attending these schools required remedial coursework. Students from these 61 underperforming school districts in Louisiana were targeted for enrollment in LA GEAR UP (Louisiana Systemic Initiatives Program, 2010). All students who attended LA GEAR UP schools were considered to be LA GEAR UP students; however, they were not required to participate in activities associated with the program.

All students who chose to attend a LA GEAR UP summer camp for the first time were required to attend a one-week introductory camp at a local university (Beer, 2009). During the introductory camp, students were introduced to the college environment by attending interesting lectures that faculty across the campuses prepare specifically for LA GEAR UP participants. Students also learned skills necessary for later college enrollment, such as how to complete the Free Application for Federal Student Aid (FAFSA), how to apply to college, how to set attainable academic goals, and study skills that would benefit them in college preparatory classes. During subsequent years, rather

than attend the introductory camp, students were invited to spend one week at one of four universities to explore an area of interest and to learn more ways to become prepared to pursue secondary education.

Each year since its inception in 2002, a new cohort of seventh grade students had been added to the LA GEAR UP program (Louisiana Systemic Initiatives Program, 2010; see Figure 1.). When this study began, the program provided services to students enrolled in 8<sup>th</sup> and 9<sup>th</sup> grades in 61 schools in the following 12 Louisiana parishes: Avoyelles, East Baton Rouge, East Feliciana, Iberia, Iberville, Morehouse, Orleans, Red River, Richland, Sabine, St. John the Baptist, and Union.



From Louisiana Systemic Initiatives Program. (2010). Louisiana GEAR UP information [webpage] Retrieved from <http://Louisiana Systemic Initiatives Program, 2010>. Reprinted with permission.

Figure 1 Parishes that Participate in LA GEAR UP

LA GEAR UP summer campers received training in college preparation and chose a theme from among the options for that year, and they also received individualized tutoring in math and science. Following their first summer camp, students were invited to return each year. During students' fourth year of enrollment in the summer camps, they were extended an invitation to become Junior Counselors who acted in leadership roles throughout the camp. An example of a leadership role was for the Junior Counselor to lead one or more of the activities for the student cohort each week. If students chose to attend camp for a fifth year, they were invited to apply for a paid position as a counselor at the camp. As counselors, students were responsible for the supervision of approximately 5-6 middle-school students while they attended LA GEAR UP camps. The student counselor acted in a variety of roles, including tutor and/or chaperone. Students who participated in four previous LA GEAR UP summer camps, and also college students from each of the universities, applied for positions as counselors. Students were required to complete an application and send in letters of reference from their teachers or professors (The IDEA Place, 2009).

The LA GEAR UP program also included four activities that took place during the academic year following the summer camps: Explorers' Club; the Guidance and Counseling project; an annual conference for students and parents; and the Preparing Parents for Possibilities Project (P3; The IDEA Place, 2009). The Explorers' Club was an extension of the summer camps. All students who attended the LA GEAR UP summer learning camp became members of the Explorers' Club at their schools during the following academic year (Schilling, 2010). An adult sponsor (teacher) from each school led the group and helped students continue working toward the goals that they set at

camp. The sponsor helped students apply the skills learned during camp in a manner that enabled them to persist through adversities and barriers that these at-risk youth faced (e.g., poverty, crime, drug availability and temptation, and a dearth of success models). Additionally, student members of the Explorers' Club participated in service activities, such as volunteering at retirement homes, throughout the year (Schilling, 2010).

During the school year, the Explorers' Club sponsor was expected to assist the students in completing an Individual Career Portfolio which was designed to help students keep track of the classes they took, their volunteer and extracurricular activities, and any other information that would be helpful when completing college applications (Schilling, 2010). The folder had sections for records to be kept each year from middle school through the senior year of high school which gave the student a way to keep all of the information organized. Throughout the year, group members met to discuss what was learned at their camps, and ways to stay academically motivated. Although these were the goals of the group, unfortunately, groups often neglected the use of the Individual Career Portfolio (G. Beer, personal communication, October, 2008).

The Guidance and Counseling project, specifically for teachers across the state who were involved in the Explorers' Club, was a series of meetings that enabled teachers to meet and share information about group projects and to review methods of implementing the Individual Career Portfolio and other documents that were given to students at the previous summer camp. Meetings were led by LA GEAR UP coordinators, who decided on an agenda for that meeting. Explorers' Club sponsors attended these groups without their students. The meetings provided a forum for communication. During these sessions, teachers were exposed to the possibilities



available for their students, and they were able to renew confidence in their own abilities to promote academic excellence among their students (Schilling, 2010). In this way, LA GEAR UP was providing a setting for increasing teachers' efficacy. Bandura (1993) found that when teachers reported higher levels of efficacy regarding their abilities to affect their students' academic trajectories, they were more likely to create environments conducive to academic progress. When teachers create such an environment, the environment promotes the improvement of students' academic efficacy.

Teachers' efficacy improves when teachers have the opportunities to see similar teachers succeed, to experience feedback, to gain social-comparative information and through direct mastery experiences. The finding that teachers' efficacy improves under the previously mentioned conditions was supported when Faiza (2012) studied the My Teaching Partner program. The program provides teachers with the previously mentioned opportunities. After the program, teachers' sense of self-efficacy improved. Like the My Teaching Partner program, GEAR UP provides opportunities for teachers to improve their teaching self-efficacy. Further, a study by Powell-Mowman and Brown-Schild (2011) found that when teachers are given opportunities for professional development their teaching self-efficacy improves.

At the conclusion of each academic year, parents and students from LA GEAR UP schools were invited to attend an annual conference at one of the participating universities (Schilling, 2010). Students presented the Explorers' Club members' accomplishments such as attaining academic excellence, participating in service activities, and applying to college. Parents and students also learned information about upcoming camp topics and scholarship opportunities.

In order to include parents in the LA GEAR UP program, coordinators planned an annual conference that highlighted the purpose and goals of the LA GEAR UP program. The parents were invited to attend the Preparing Parents for Possibilities (P3) meeting held in conjunction with the annual conference. At the P3 meeting, parents learned to encourage their children to succeed academically. LA GEAR UP coordinators taught parents how to help motivate their children for the possibility of attending post-secondary institutions. Specifically, the coordinators taught parents the importance of service and extracurricular activities, what college prep classes are necessary, and how to navigate the college application process. Attendees of the conference included LA GEAR UP students, parents, and Explorers' Club sponsors.

College connections workshops were another facet of the LA GEAR UP program, and they were held in conjunction with the Parenting for Possibilities Project and LA GEAR UP camp. These workshops were attended by students and parents throughout the academic year. At each workshop, parents and students were taught how to fill out applications for financial aid and college. Additionally, parents and students learned how to apply for Rewards for Success scholarships which ranged from \$250-\$1000. Students competed for these scholarships in areas such as academic achievement, student responsibility and parental involvement. Academic scholarships were based on academic achievement which was measured by grade point average (GPA). Student responsibility scholarships were given to students who excelled in service work and who demonstrated excellence in their willingness to perform service activities within the community. Parental involvement scholarships were awarded to students whose parents participated fully in the LA GEAR UP program. The more a parent participated, the more likely the

student was to be awarded the scholarship, and the scholarships provided significant incentive for parents (and for students to engage in persuasion of their parents) to participate. Therefore, the parents' involvement in the students' academic life could result in monetary gain. Also at the workshops, parents and students were introduced to individuals involved in college recruitment and also those who could assist them with filling out financial aid paperwork (Schilling, 2010). Throughout the workshop, parents' self-efficacy to encourage academic success was improved because parents left armed with information about the college application process and about how other parents were helping their children to succeed academically.

The goal of the combined projects was to get parents, students, and teachers working together to achieve academic success by improving the chances that students would apply to post-secondary institutions (Louisiana Systemic Initiatives Program, 2010). The LA GEAR UP program provided students with an opportunity to succeed, to view others who are similar to themselves succeed, and to receive encouragement from teachers and parents.

Although increasing academic self-efficacy was not one of the original stated goals of the program, it is very likely that increased academic self-efficacy ratings are a result of program participation. Bandura (1977) reported that when this triad of events (opportunities for success; opportunities to observe others succeeding; and receiving encouragement from others who are close to the individual) occurs frequently and predictably, greater increases in personal self-efficacy occur than if these events happen more sporadically. The LA GEAR UP program provided all of these necessary conditions for increasing student academic self-efficacy.

Empirical research has found that self-efficacy can be improved when programs such as these are implemented. Jensen (2013) provided students with information about the college application process and then measured “college-going self-efficacy.” After four days of program participation, students’ self-efficacy increased. Furthermore, Radcliffe and Bos (2011) measured students’ aspirations and math grades beginning in the 7<sup>th</sup> grade and ending in the 10<sup>th</sup> grade and found that when they participated in GEAR UP, students’ academic aspirations increased and math grades improved. Students participating in GEAR UP programs in New Jersey and West Virginia also experienced improved academic performance (Finch, Cowley, & Ael, 2003; Heisel, 2005).

Participation in school-related activities and extracurricular activities, like LA GEAR UP Camp and Explorers’ Club, impacts students’ academic performance (Barber, Stone, & Hunt, 2003). In their study of 10<sup>th</sup> and 12<sup>th</sup> grade students, Barber et al. found that students who participated in five types of extracurricular activities demonstrated better academic achievement and less risk-taking behaviors than students who did not participate in extracurricular activities. Furthermore, when students are involved in extracurricular activities they are also more likely to attend college, according to a study by Mahoney, Cairns, and Farmer (2003). They found that high school students who were involved in school-related activities had higher educational aspirations and were more likely to attend college than students that did not participate in school related activities.

Academic achievement can also be impacted by voluntary participation in support groups for “uninvolved students” (Howard & Ziomek-Daigle, 2009). Howard and Ziomek-Daigle studied “uninvolved students” who voluntarily enrolled in a support group and found that those students demonstrated improved academic performance.

Finally, participation in school sponsored activities is positively related to students' academic performance in math and reading (Dumais, 2009). Dumais utilized data collected in the National Education Longitudinal Study in 1988 and data collected in 2002. She found that in both samples, participation in school-sponsored activities was related to improved academic achievement.

Marsh & Kleitman (2002) studied the role that participation in extracurricular activities plays in a variety of areas. They found that students who were more involved in extracurricular activities spent more time completing their homework, completed more university applications, had higher academic expectations, had higher self-esteem, received more Carnegie units, had higher grades, and had higher occupational aspirations. Such students were also less likely to use illicit substances and spent less time watching television. Parents of involved students also had higher aspirations for their children.

Posner and Lowe Vandell (1999) studied 194 students enrolled in the 3<sup>rd</sup>-5<sup>th</sup> grades and found that children who were involved in after school programs spent more time on academic activities. Posner and Lowe Vandell's findings support the findings of Marsh and Kleitman (2001). Not only do students spend more time on academic tasks, but they experience changes in their self-perceptions. Durlak, Weissberg, and Pachan (2010) conducted a meta-analysis of after-school programs and found that when programs seek to enhance personal skills and social skills, students experience increased self-perceptions.

Bartko and Eccles (2003) collected a wide variety of data from 918 adolescent students. They measured students' participation in structured activities, students' behavior at home and school, and students' psychological well-being. They found that

students who are engaged in a variety of structured activities experience improved academic achievement. They also have fewer behavioral problems at home and at school and they are less likely to suffer from symptoms of depression.

Beyond self-perceptions, increased involvement in extracurricular activities is associated with less frequent risk-taking behavior. Fredericks and Eccles (2006) studied the roles of school activities and sports and found that in boys increased participation in extracurricular activities was related to less alcohol and marijuana use. They also found that there is a positive relationship between the number of activities students pursue and the number of years of school students complete.

### **Social Cognitive Theory**

Social Cognitive Theory is important because the theory addresses the mechanisms individuals use to make attributions about themselves and others (Dweck, 1999). Three theories contributed to the development of Social Cognitive Theory: Attribution Theory, Expectancy Value Theory, and Goal Theory (Kelley, 1973). Dweck (1986) described Social Cognitive Theory as instrumental in the educational domain because the theory provided educational researchers with psychological foundations for their theories. Bandura (1994) explains that self-efficacy is a major component of motivation. Individuals are motivated to behave, when they feel they are capable of completing the task at hand. When studying self-efficacy, it is important to understand not only self-efficacy, but also the motivation theories that Bandura used to develop Social Cognitive Theory and the concept of self-efficacy.

## **Attribution Theory**

Three theories shaped the development of Social Cognitive Theory: Attribution Theory, Expectancy Value Theory, and Goal Theory. First, it is important to address attribution theory (Kelley, 1973; Weiner, 1985). Kelley suggested that Attribution Theory addresses three major areas: naïve psychology, or common answers to questions about why other people behave the way they do, self-perception, or reasons people believe they behave the way they do, and psychological epistemology, or the degree to which people have “a sense that their beliefs are veridical” (p. 107). Attributions contribute to the development, or lack of development, of self-efficacy. Attribution Theory addresses how attributions are made and what information individuals use to make attributions. Co-variation principle says that “an effect is attributed to the one of its possible causes with which, over time, it co-varies” (Kelley, 1973; p. 108).

Without much cognitive effort, individuals notice how frequently two events occur together (Kelley, 1973). When events co-occur, both the temporal relationship and the ordinal relationship of the events are used to make attributions. To determine relationships of causation, one event must precede another event and the two events must occur in a relatively short time span of one another. When these two conditions are met, individuals draw conclusions or make attributions based on that information. Weiner (1985) expands Kelley’s statements and suggests that locus, stability and controllability are three common perceived causes of success. Weiner and Kelley’s findings suggest that not only the temporal relationship is important, but also the frequency with which the event occurs and the degree to which people have control of the outcomes.

It is apparent then, that the attribution one makes depends on a variety of factors including difficulty of test, previous performance on the test, and the environment in which the test was given (Kelley, 1973). Based on the available information, the student will determine if his/her poor test performance was due to internal factors or external factors. Students interpret their successes and failures and their interpretations determine what impact those events will have in the students' lives (Dweck, 1999). The student is most confident in the resultant attribution when three conditions are met: the response is associated distinctively with the stimulus, there is consensus, and responses to the stimulus are consistent over time. In other words, when the student takes the math test and does poorly on the math test, poor performance and taking math tests become associated with one another. The association between poor performance and math tests is strengthened when others agree that poor performance and taking math tests are related. Finally, when the student performs poorly on math tests on multiple occasions, then the student becomes confident in his attribution. The decision about whether poor performance is based on internal or external factors depends on the environmental cues.

Without noticing, the student evaluates whether or not other students' performances were similar to his/her own performance, whether the test was difficult or easy, and whether environmental circumstances could have caused the poor performance (Kelley, 1973). If a student finds that the test was easy, others did well on the test, and the test-taking environment was free of inhibitory factors, the student is then likely to draw the conclusion that internal factors (i.e., lack of math ability) are the cause for poor performance; whereas, if the test was hard, others also did poorly, and/or the test-taking environment was not optimal, the student may make external attributions about the poor



performance (i.e., the test was too difficult, the classroom was too loud, etc.). Although simplistic, the above explanation gives some insight into the decision trees used to make attributions about one's ability. The basic idea is that individuals make self-attributions based on a variety of factors, and are more likely to make external attributions when competing external explanations are available to explain the phenomenon of poor test performance. Personal efficacy judgments are, in part, based on the causal attributions developed based on these factors. Furthermore, Weiner (1985) posited that attributions are also significantly impacted by a person's affective state at the time of an experience. So, feelings of shame or anger at the time of poor test performance will influence the attributions made.

Teachers also make attributions about their students (Clark, 1997). Clark studied teachers' attributions and the impact of those attributions by having teachers read eight vignettes about a hypothetical boy and then teachers provided ratings of their anger, pity, and expectations of the boys when the boys failed at an academic task. Teachers were then asked what feedback they would provide to the child. When teachers perceived that the boy's level of ability was low and he was exerting a high degree of effort, teachers gave less punishment and more reward. Furthermore, teachers' expected failure from boys who were perceived to have low ability and to exert low effort. These findings support the notion that attributions are made based on available information and shape our expectations for the future.

A similar study by Reyna and Weiner (2001) yielded similar results. In Reyna and Weiner's study, teachers were read vignettes and asked to imagine that the students described were in the teachers' classes. Teachers were then asked to respond to the

student as they would respond in their own classrooms. The students' perceived role in the failure impacted the emotions and thoughts experienced by the teachers. Teachers responded punitively to students when teachers perceived that the students could have controlled their success or failure. Reyna and Weiner's finding was particularly true when teachers' perceived a pattern of low effort.

### **Expectancy Value Theory**

Also important in the development of Social Cognitive Theory is Expectancy Value Theory. Basically, individuals make decisions about their behaviors based on the expected outcome. The idea that decisions are based upon expected outcomes ties back to Attribution Theory, because when the attributions made about ability result in internal attributions, such as inability to perform well on math tests, students are likely to avoid math altogether (Bandura, 1995). Expectancy Value Theory concerns "motivational influences on individuals' performance on different achievement activities and their choices of which activities to pursue" (Bembenutty, 2012; p. 186). In the Bembenutty interview, Wigfield explained that expectancy beliefs are influenced by beliefs about ability, performance expectations, and the value one places on a behavior or incentive one expects from the behavior. He went on to describe three types of values: interest value, attainment value, and utility value.

Interest value is the value placed on an activity based how much the individual enjoys the activity (Bembenutty, 2012). Attainment value is determined by the level of importance the individual attributes to the activity. Utility value concerns individuals' perceptions about the usefulness of a given activity. Each of these types of value influences decisions about whether or not to engage in a given activity. If the individual perceives little or no value, in terms of these three types of value, then the individual is

likely to avoid the activity. For example, if in class students find that the material is consistently dull, the students' parents have emphasized the lack of importance of school, and the students plan to drop out of school and pursue jobs, then they are unlikely to pursue more classwork. Instead, they are likely to avoid class participation completely because of the low value placed on class.

Using Structural Equation Modeling, Meece, Wigfield, and Eccles (1990) found that expectancies and values have a bi-directional relationship. Expectancies impact the value that students place on activities and values impact expectancies. Furthermore, they found that efficacy beliefs and perceptions of value were related to performance.

As exemplified above, beliefs and values are influenced by individuals near the student, including parents and teachers (Bembenutty, 2012). Past experiences and situational contexts also influence the value placed on different activities. For these reasons, it is possible to enhance the value of an activity. In the classroom setting, teachers can enhance the value students' place on achievement by giving the students opportunities to succeed, focusing on individual achievement rather than relative achievement, and focusing evaluations on ways the student's efforts can result in success. Furthermore, when relevance of class material and importance of education and learning are emphasized, value of academic achievement is enhanced. In summary, students tend to decide on their courses of action based on the anticipated results of that action.

An empirical study by Borders, Earleywine, and Huey (2004) lent support to the Expectancy Value Theory. They measured high school students' problem behaviors, perceived academic competence, academic expectancies, and problem behavior expectancies and found that students' academic expectancies were significantly related to

students' behavior problems. Students with low academic expectancies reported more problem behaviors at school.

### **Goal Theory**

Related to Expectancy Value Theory is Goal Theory, which was developed in order to explain students' adaptive and maladaptive responses to achievement challenges (Senko, Hulleman, and Harackiewicz, 2011). Bandura and Schunk (1981) found that setting proximal goals, or goals that can be reached quickly rather than in the distant future, is related to task mastery, increased self-efficacy, and self-regulated learning. Additionally, they found that self-efficacy was positively correlated to mathematics performance. According to Expectancy Value Theory, goals can be categorized as either mastery goals or performance goals, based on the function of the goal (Senko et al., 2011). Mastery goals are goals that individuals develop in order to develop competency in an area; whereas, performance goals are developed as a means of demonstrating competence for the purpose of outperforming one's peers.

Students who set mastery goals can be differentiated from students who set performance goals in a number of ways (Senko et al., 2011). Those students who set mastery goals tend to see ability as a fluid attribute that can be enhanced by increasing effort; while, students with performance goals are thought to view ability as unchanging (Dweck, 1999). Additionally, challenges and adversity are more easily navigated by students who set mastery goals than their performance goal counterparts. Not only do students with mastery goals navigate adverse situations more easily, but they also seem to enjoy the challenges, unlike students who set performance goals. Additionally, Levy, Kaplan, and Patrick (2004) found that students with performance goals often viewed

social cooperation as a mechanism for gaining social status. Conversely, students with mastery goals viewed social cooperation as a mechanism for improving cohesion in the classroom, gaining friendship, and as a way to learn. Students with performance goals, who are self-confident, perform similarly to students with mastery goals. However, students who lack self-confidence tend to exhibit less resiliency and to feel helpless when faced with adversity (Senko et al., 2011).

In 1988, Elliot and Dweck found that students who have low perceived ability and who use performance goals respond similarly to people who are experiencing learned helplessness. Conventional thought concerning goal theory was that individuals who set mastery goals tended to outperform individuals who set performance goals. Furthermore, students who set mastery goals tend to find classes more interesting, to persist when facing difficulty, to value cooperativeness, to seek help when confused, to effectively self-regulate, to use deep-learning strategies, navigate decisional conflict well, experience positive emotion, and perceive tasks as valuable.

Mastery goals are, by their very nature, task-based. Competency is achieved when certain tasks are achieved. Mastery goals can generally be achieved by anyone who sets goals (Senko et al., 2011). Performance goals, on the other hand, are not as easily defined, because they are not only based on the student's own performance but also on the performance of peers. Brophy (2005) cautioned that performance goals can easily be transitioned into performance-avoidance goals that ultimately result in learned helplessness. Such transitions were demonstrated in studies by Senko and Harackiewicz (2004) and Middleton, Kaplan, and Midgley (2004), who found that students, who

initially set performance approach goals, eventually changed their goals to performance-avoidance goals.

Brophy (1998) discussed learned helplessness in terms of a “failure syndrome.” She explained that students with “failure syndrome” typically fail not because they are incapable, but because they fail to exert enough effort and quit the moment that adversity arises. She reported that these students tend to attend to getting their needs for attention met at school more than they attend to the academic curriculum. Brophy found that students who begin to feel a sense of hopelessness had often experienced anxiety provoking situations at school. Performance monitoring is inherent in academia. As such, it is not uncommon for students who experience failure syndrome or learned helplessness to have perceived their academic performance as poor when compared to their peers, their own expectations, and/or the expectations of their teachers.

Students who experience repeated failures often begin to feel helpless and hopeless (Margolis & McCabe, 2004). Margolis and McCabe found that students resist academic pursuits, having learned through failed academic attempts that they will be unlikely to succeed. Further, the researchers found that from these experiences, students begin to make negative self-attributions concerning their academic abilities. Their attitude about learning becomes more negative as time passes. Rather than pursuing opportunities to become better at academics pursuits, they begin exhibiting avoidance which exacerbates their academic problems and may inhibit all goal setting.

Evidence suggests that students who set performance goals and students who set mastery goals are different, and research suggests that these differences cannot be explained simply, in terms of performance or mastery goals (Senko et al., 2011). Instead,

Elliot (1999) further categorized goals into: performance-approach goals, performance-avoidance goals, mastery-approach goals, and mastery-avoidance goals. Performance-approach goals are those goals that are set with the specific purpose of outperforming one's peers. Performance-avoidance goals are aimed at avoidance of appearing less competent than one's peers. Rather than working to achieve competence, individuals who set avoidance goals are working to avoid appearing less capable than peers. Conversely, mastery-approach goals are set with the intention of learning a skill or improving a skill and mastery-avoidance goals are set to avoid learning failures or declining skills. Overall, avoidance goals tend to be associated with high anxiety, disorganized study habits, help-avoidance, self-handicapping, low achievement, and low interest.

Instead of a simplistic dichotomous approach to goal setting, wherein goals are categorized as "performance" or "mastery," the differences between students can be better explained in terms of approach and avoidance (Senko et al., 2011). Student performance cannot be easily predicted based only on the mastery/performance dichotomy. Elliot, McGregor, and Gable (1999) studied achievement goals as predictors of study skills, which they then studied as mediators of the relationship between achievement goals and academic performance. They found that mastery goals predicted deep processing, persistence and effort; whereas, performance approach goals predicted surface processing, persistence, effort, and exam performance. Finally, performance avoidance goals were positively related to surface processing of information and disorganization and negatively related to deep processing and exam performance. Elliot, McGregor, and Gable's finding supports the idea that goal theory is more complicated than previously believed.

In their literature review, Senko et al. (2011) found that empirical studies actually produced mixed results. In fact, students who set mastery-avoidance goals tended to demonstrate low self-efficacy, disengagement, poor academic performance, and high anxiety. Furthermore, performance goals are associated with some positive attributes. Senko and Harackiewicz (2004) studied the impact of competence feedback on the pursuit of achievement goals and found that poor exam performance was negatively related to mastery goal and performance pursuit and positively related to performance-avoidance goal pursuits. Additionally, performance approach goals were related to success on both exams and novel activities. Mastery goals were related to increased interest in given tasks. There is some evidence that performance goals might promote classroom achievement more reliably than mastery goals (Senko et al., 2011). Empirical research by Pintrich (2000) examined self-report goals of and math grades for 8<sup>th</sup> and 9<sup>th</sup>-grade students. He found that students with performance-approach goals were more likely to become more academically engaged. Furthermore, when paired with mastery goals, performance goals are adaptive, according to findings by Pintrich (2000).

Expectancy Value Theory, Attribution Theory, and Goal Theory set the stage for the development of Social Cognitive Theory (Kelley, 1973). Studies have shown that expectancy, self-attributions and the types of goals individuals set for themselves have a pervasive impact on what activities they pursue, what activities they avoid, as well as the amount of effort and energy they choose to expend for a given activity. In 2005, Bembenutty found that when students expect academic failure, attribute failure to internal characteristics, and generally use academic goals as a means of avoiding embarrassment, it is likely that they will avoid academic pursuits and expend little energy on improving



academic performance. Students who have a helpless orientation often begin to stop applying themselves to academic problems when they begin to feel that they are incapable of achieving success. In her book, Dweck (1999) discussed studies (Dweck, 1975; Dweck & Repucci, 1973) wherein, students were asked to complete tasks of varying difficulty. Helpless oriented students quickly began to doubt their abilities and blame their shortcomings for failure. Furthermore, after experiencing failure, they began to believe that they could not solve problems that they had previously solved successfully. Mastery oriented students, however, worked harder when facing challenging tasks and easily solved previously solved tasks after experiencing failure (Dweck, 1999). Social Cognitive Theory posits that individuals influence their environment as much as they are influenced by their environment. They are “agents of experience rather than just undergoers of experience” (Bandura, 2001, p.4).

Dweck (1986) posited that Social Cognitive Theory has been instrumental in the educational domain because Social Cognitive Theory presented educational researchers with psychological foundations for their theories. Social Cognitive Theory focused on underlying psychological processes and helped educators to develop interventions helpful in addressing the needs of struggling learners. Social Cognitive Theory contributed to the understanding that beliefs about ability, rather than actual ability, are the best predictor of mastery-oriented qualities. Triadic reciprocity, or the relationship between the student’s ability, environment, and outcomes is key to the role of Social Cognitive Theory in academic settings (Zimmerman, 1989). The student’s ability is not the only contributor to student success or failure. Ability is impacted by environmental factors, like encouraging teachers, the outcomes of behavior, and perhaps participation in a project such as LA

GEAR UP. Furthermore, the triadic relationship is a reciprocal relationship; wherein each component impacts the other components.

### **Human Agency**

Human Agency is an important concept because the theory addresses individuals' ability to intentionally initiate a course of action. As agents, individuals use various sources of information and respond intentionally to their environments. Specifically, Bandura says that people arrive at standards for their behavior by evaluating themselves and regulating their behavior accordingly (Bandura, 2001). So, as human agents, individuals gather information, determine the value of the information, plan, and execute a plan with the intention of achieving their goal. Human agency is important, because it is this component of Bandura's Social Cognitive Theory that explains the intentionality that underlies behavior. More specifically, it is the fact that we behave intentionally that explains why self-efficacy is so important in predicting future behavior.

When individuals choose courses of action, it is not future expectations alone that act as motivators or inhibitors of behavior (Eccles & Wigfield, 2002). Instead, people use all of the information available to calculate the probability of different outcomes and from these calculations they decide what pursuits are worthwhile and what pursuits are not (Kelley, 1973). Taken in combination with all of the other information available to the individual, expectations shape behavior. Rather than looking in isolation at the impact of one dimension of motivation, Social Cognitive Theory provides an encompassing view of how individuals choose what course their lives will take (Bandura, 2001).

As active influencers, or agents, within their environments, individuals do things intentionally (Pintrich, 2000). That is, they act with purpose, not just expectation.

Behavior is guided by goals that are influenced by internal value systems, personal goals, and the anticipated outcome. Bandura (2000) suggests that the key feature of what he terms “human agency” is the ability to intentionally initiate a course of action. As agents, individuals use forethought and self-direction when facing competing influences of behavior. Specifically, Bandura says that “after they adopt personal standards, people regulate their behavior by self-evaluative outcomes which may augment or override the influence of external outcomes” (Bandura, 2001; p. 7). So, as human agents, individuals take all available information, determine the value of the information, plan, and execute a course of action with the intention of achieving some goal.

### **Modes of Agency**

Additionally, there are three modes of human agency including personal agency, proxy agency, and collective agency (Bandura, 1982). Personal agency is the acquisition of agency through direct experiences and it involves the belief that individuals can produce desired effects through their actions. Personal agency can only be exercised in situations in which direct control can be exerted. Exerting personal agency requires high self-efficacy because without the confidence to act, individuals may avoid the task altogether, or use proxy agency in a maladaptive way (Bandura, 2001). Caladarci (1992) measured 52, K-8<sup>th</sup> grade teachers’ teaching efficacy, school climate, and commitment to teaching. They found that teachers, who have high teaching efficacy, or the belief that they can positively impact students’ performance, were more committed to their profession than less-efficacious teachers. Caladarci’s finding supports the idea that individuals use direct experiences to form beliefs and then modify their behavior

accordingly. Teachers who have high self-efficacy demonstrate more commitment to their profession. That is, they behave differently than less-efficacious teachers.

Proxy agency is the acquisition of agency through vicarious experiences (Bandura, 2001). Individuals gain efficacy by watching others achieve goals and make attributions about their own abilities by proxy. Proxy agency is typically utilized when individuals are not able to exert direct control over a situation. Use of proxy agency requires high social efficacy, as the individual will be required to interact with another individual in order to motivate others to do what is needed to accomplish the task (Bandura, 2000). Proxy agency is typically required when others lack the skill set necessary to accomplish a task, believe someone else can do a better job of completing a task, or do not desire the responsibility that accompanies taking on a task. Because proxy agency is used when individuals believe someone else will perform the task more easily, individuals can experience both adaptive and maladaptive consequences of utilizing proxy agency. When an individual uses proxy agency responsibly self-development is promoted, but when proxy agency is used as a mechanism for avoiding the acquisition of necessary skills the use of proxy agency can be maladaptive as proxy agency impedes the development of competence.

The notion of proxy agency is most apparent within the family system (Bandura, Caprara, Barbaranelli, Regalia, Scabini, 2011). In their study, Bandura, et al., 2011 studied 142 intact families. They measured spousal self-efficacy, filial self-efficacy, collective family self-efficacy, adolescents' communication with parents, adolescents' self-disclosure and family satisfaction. They found that family satisfaction was increased

when spouses felt that they could depend on one another and when children and parents believed that they could depend on one another.

Finally, collective agency is the collective belief that individuals can work together to achieve a goal (Bandura, 2001). A good example of collective agency is the collective beliefs of students, parents, and teachers that a student can achieve a goal. Collective agency is not merely the sum of each participant's personal efficacy, but collective agency is an interactive sense of efficacy, wherein one participant's sense of efficacy impacts the other participants' sense of efficacy. Collective agency requires the belief that one can work collectively with others to achieve a desired result. Collective agency is a complex mode of agency involving dynamic transactions between individuals as well as shared intent, intellect, and skills (Bandura, 2000). Collective agency is a group-level property where individuals work together to achieve a shared goal, utilizing their independent skills and abilities; however, they share the belief that the goal can be attained. Mulvey and Klein (1998) defined collective efficacy as a group's aggregate belief its members are capable of a task. In their study, they found that collective agency, or collective efficacy, was positively related to goal difficulty and commitment to a group goal. So, collective efficacy increases as goal difficulty and commitment to the group increases. Benefits to strong perceived collective agency include resilience when faced with adversity, higher group aspirations, more motivational investment in meeting a goal, greater sense of morale, and greater performance accomplishments (Bandura, 2000).

While the modes of agency that were mentioned are separate constructs, their development is interrelated. In fact, Goddard and Goddard (2001) studied 438 teachers from 47 schools and found that teachers' personal efficacy was positively related to

schools' collective efficacy. So, the agency of teachers is dependent on the presence or absence of collective agency. Furthermore, collective efficacy is affected by organizations. That is, the sense of collective efficacy is higher when schools foster the belief that teachers and students can succeed.

Agency is not developed separate from the social structure inherent in everyday life (Bandura, 2000). Instead, agency is developed within the confines of the social-structure present in the environment. Social structure is purposed to regulate human behavior. As such, social structure does impact agency. In 2001, Bandura postulated "Triadic Reciprocal Causation" when discussing the interplay between development of agency and social structure. He reported that internal personal factors, like cognitive ability, affective state, biological events, behavioral patterns, and environmental factors, "operate as interacting determinants that influence one another bi-directionally" (p. 15). He explicated that behavioral effects occur when social structural factors impact psychological mechanisms. More specifically, he reported that aspirations, self-efficacy, personal standards, etc. are affected by social structural factors such as socioeconomic status, economic conditions, educational structure, and family structure. Behavioral changes then occur based on the interplay between environmental factors and psychological factors. Rather than just passive reactors to the environment, people are both products and producers of their environments. In other words, individuals play a role in shaping the world around them, and are simultaneously shaped by the world.

LA GEAR UP provides teachers with on-going training and support, provides students with opportunities to succeed and to view others succeeding, and provides parents with information for helping their children to succeed academically (Beer, 2009).

When collective efficacy is high in the school environment, teachers' efficacy is increased and students' academic achievement is increased (Goddard & Goddard, 2001). Goddard and Goddard's finding supports the notion of "Triadic Reciprocal Causation", because schools impacts teachers, teachers impact students, and students' performances are feedback for the schools and the teachers. The notion was further supported by Calik, Sezgin, Kavgaci, and Kilinc (2012) who studied 328 teachers and found that instructional leadership was positively related to teachers' efficacy and collective agency.

### **Self-Efficacy**

#### **Defining Self-Efficacy**

According to Pajares and Urdan (2006), self-efficacy is the primary mechanism of Social Cognitive Theory. In their research, they found four core features of self-efficacy: intentionality, goal setting and expectations of outcomes, self-regulation, and self-examination. As human agents, individuals have intentions about the direction of their life. They set goals that are based largely on expectations about the outcome of working toward the goal. Furthermore, they utilize self-regulation as a tool for achieving the goal and constantly re-evaluate their progress. Eccles and Wigfield (1995) found that academic self-efficacy beliefs were positively related to the value that students placed on achievement.

Self-efficacy is useful in predicting success in a variety of domains (Pajares & Urdan, 2006). In their 1989 study, Shell, Murphy, and Bruning measured students writing and reading achievement, self-efficacy scores, and outcome expectancies and found that self-efficacy was a stronger predictor of writing achievement than outcome expectancy alone. It was when outcome expectancy and self-efficacy were combined that the researchers were able to predict a significant amount of the variance.

Prior to further defining self-efficacy, it is important to compare and contrast self-efficacy with some related constructs. Self-efficacy is an evaluative construct that taps into individuals' beliefs about whether or not they can perform specific tasks. It is important to note that self-efficacy is not an evaluation of one's self-worth or self-concept (Gist & Mitchell, 1992). Rather, self-efficacy is specific to the task at hand, unlike self-esteem. Although superficially similar to self-efficacy, self-esteem is a more global construct that taps into individuals' opinions of their self-worth and self-liking across a variety of situations; whereas, self-efficacy is dependent upon the task being evaluated. Likewise, self-confidence is a more global construct, defined by Cheng & Furnham (2002) as "a person's sense of his or her own competence or skill and perceived capability to deal effectively with various situations" (p. 330).

Unlike self-confidence, one may have high self-efficacy with regard to one domain while simultaneously lacking self-efficacy in another domain (Bandura, 2007; Gist & Mitchell, 1992). For example, an individual who has attained a graduate degree in engineering is likely to have high self-efficacy in the domain of math, but may also lack self-efficacy in another domain, such as athletics. Furthermore, self-efficacy is not necessarily linked to more global self-attributions, so lack of athletic self-efficacy does not preclude the individual from having a positive overall self-evaluation in the same way that low self-esteem affects the global self-evaluation of an individual (Gist & Mitchell, 1992).

The task-specific nature of self-efficacy has been supported in an empirical study by Smith, Kass, Rotunda, and Schneider (2006) who studied the effects of failure on self-efficacy in college students and found that after failure, task-specific self-efficacy, but not



general self-efficacy, was decreased. Further, task-specific self-efficacy was more predictive of future performance than was general self-efficacy. The theory was further supported when Oei, Hasking, and Phillips (2007) found that drinking refusal self-efficacy was more predictive of alcohol consumption among a community sample than general self-efficacy.

Bandura (1997) explained that individuals with “high self-efficacy are more likely to have high aspirations, think in futuristic terms, think soundly, welcome challenging tasks, and commit themselves to meet challenges” (p. 1). In other words, individuals with high self-efficacy tend to set lofty goals for their future, think decisively about a challenge, and commit to meet that challenge (Bandura, 1997; Berry & West, 1993). Furthermore, they are less likely to imagine all of the possible negative outcomes that may arise from pursuing the goal; whereas, individuals who lack self-efficacy are likely to exaggerate threats and to worry unnecessarily about unlikely threats. Self-efficacious people are likely to feel as though they have some control over threats (Bandura, 1994).

Uwah, McMahon, and Furlow (2008) studied school belonging, educational aspirations and academic self-efficacy among male, African American high school students. They found that academic self-efficacy was positively correlated to both educational aspirations and feelings of belonging at school. These findings support the theory that students with high self-efficacy think futuristically and are more likely to have high aspirations than students with low self-efficacy. Bassi, Steca, DellaFave, and Caprara (2006) also found that more efficacious students had higher aspirations. Furthermore, they found that efficacious students spent more time doing academic tasks, such as homework than less efficacious students.

In a 2001 study, Bandura, Barbaranelli, Caprara, and Pastorelli substantiated Bandura's theory, when they investigated the role that academic self-efficacy plays in career choice. They found that students' career aspirations, both the field and the level of study, are determined by their level of academic efficacy. Students who have high academic self-efficacy seek out challenging fields and advanced degrees, unlike their less efficacious counterparts.

In her 1999 book, Dweck discusses how the tasks that students attempt are inextricably linked to their interpretations of intelligence. People who believe that intelligence is a fixed trait will seek out opportunities to out-perform others and easily attained successes. In contrast, when individuals believe that intelligence is a dynamic trait, they will seek opportunities to learn and will not be threatened by challenging tasks. These tendencies are linked to students' beliefs about their abilities. Dweck's finding supports Bandura's (2001) notion that when students believe that they are capable of learning, that is, they have academic self-efficacy, they are not threatened by the idea of challenging tasks.

Not only does self-efficacy influence which tasks individuals will attempt, it also affects the level of persistence they will exhibit. Individuals who believe they are capable of performing a task are likely to persist for significantly longer periods of time than those who have lower levels of self-efficacy for the same task (Bandura, 1997; Lent, Brown, & Larkin, 1984). Bandura further suggests that individuals who report lower levels of task-specific efficacy are more likely to assume that a task is more difficult than the task actually is, and they are more emotionally reactive and more preoccupied with

their own shortcomings than their counterparts who report higher levels of task-specific efficacy.

“If self-efficacy is lacking, people tend to behave ineffectually, even though they know what to do” (Bandura, 1986, p. 425). Bandura’s quote suggests that students who do not believe that they can achieve academic success will be ineffective in their academic pursuits despite the fact that they have the ability to perform well academically. As a result, students avoid undertaking classes or academic activities that promote choices that lead to college attendance. Bandura discussed avoidance of academic activities in his 1986 book, when he stated that avoidance of threatening tasks, in this case academic tasks, is a mechanism utilized to protect students’ self-esteem.

Empirical research supports the idea that efficacious students persist longer than non-efficacious students. The finding that efficacious students persist longer has been replicated with college students from varying backgrounds (Cook, 2013; Fletcher, 2012). Efficacious students attempt more difficult courses and are more likely to graduate from college than students who lack self-efficacy.

Bandura (1982) emphasized the importance in the assessment of self-efficacy of distinguishing between what people believe themselves *capable* of doing and what they actually *would* do. He also emphasized the necessity for individuals to be able to express feelings about themselves in the assessment environment without fear of judgment.

Zimmerman (2000) suggested that self-efficacy is different conceptually and psychometrically from “related motivational constructs such as outcome expectations, self-concept, and locus of control” (p. 82). He also asserted that self-efficacy is a

construct that is sensitive to environmental changes and is a highly effective predictor of students' academic achievement.

Zimmerman (2000) went on to differentiate self-efficacy from other motivational constructs in the following ways. Self-efficacy is a future-oriented measure of perceived ability. Outcome expectancies, on the other hand, are based on individuals' expectations about an outcome based on their belief about their ability. The distinction here is that self-efficacy measures beliefs about ability rather than beliefs about outcome.

Zimmerman also suggested that the same distinction can be made regarding locus of control. Self-concept is differentiated from self-efficacy in that self-concept is a more global assessment about who someone is, rather than an assessment of abilities. Zuffiano et al. (2013) measured self-efficacy and self-esteem in middle school students and found that self-efficacy was a unique contributor to students' self-regulated learning. Self-efficacy is a better predictor of academic success than is self-esteem and related constructs. So, students' self-efficacy will more effectively predict how well students do in school.

Bandura (1986) wrote extensively about self-efficacy as a common mechanism in human motivation and action. He noted that motivation is mediated by affective self-evaluation, personal goal setting, and perceived self-efficacy. He described self-efficacy as "self-referent judgments arrived at through cognitive processing of diverse sources of efficacy information" (p. 362). He reiterated that self-efficacy ratings are influenced by a variety of factors including performance feedback, task difficulty, amount of effort expended, amount of outside assistance used, mood or physical state at the time of the assessment, and other circumstances surrounding performance. These findings were

substantiated by Britner and Pajares (2006) who studied middle school students' self-efficacy and the value of mastery experiences, vicarious experiences, social persuasions and physiological arousal. They found that self-efficacy was significantly related to mastery experiences, vicarious experiences, social persuasions, and physiological arousal. Schunk and Rice (1985, 1991) lent further support to the theory when they found that performance feedback and modeling resulted in higher self-efficacy.

### **The Development of Self-Efficacy**

Bandura became convinced of the benefits of measuring domain-specific self-efficacy instead of global self-efficacy (Bandura, 1986). According to Bandura, individuals often perceive themselves to be highly capable in some areas and not in others. For this reason, according to Bandura, researchers who use global measures miss important clues concerning the pattern of perceived self-efficacy within an individual (Pajares, 1996). Bandura (1994) also stated that perceived self-efficacy can be altered in a variety of ways, including (a) direct mastery experiences; (b) social-comparative information conveyed through vicarious experiences; (c) social persuasion; (d) attributional evaluations; and (e) proffered incentives.

In order to increase self-efficacy, Bandura (1997) postulated that individuals need to experience success which has been achieved by persevering in the face of adversity. It is also important, he emphasized, that individuals observe people similar to themselves succeeding. Furthermore, encouragement from significant others bolsters self-efficacy. These assertions were substantiated in later empirical studies (i.e., Bandura, 2001; Bandura, 2005) that he conducted with elementary and middle school students from a small community in Rome.

Additionally, Bandura (1977) reported that performance-based procedures are the most powerful tools for changing self-efficacy. He noted that cognitive processes play a prominent role in these changes. He explained by saying that both personal experiences and vicarious experiences play a role in the development of self-efficacy. Bandura reported the impact of vicarious experiences can be explained as modeling, where “symbolic construction serves as a guide for action” (p. 191). People refine knowledge gained through vicarious experiences, through personal experiences. In other words, they make assumptions about their ability based on what they see and then refine those assumptions based on what they experience. Bandura’s assertions were confirmed in a study by Lopez and Lent (1992). In their study, Lopez and Lent measured students’ math self-efficacy and sources of students’ self-efficacy. They found that past performances were the strongest predictor of self-efficacy.

Schunk and Swartz (1993) conducted a study with 5<sup>th</sup>-grade students, where students received writing instruction, developed goals and received feedback based on their writing performance. Students who developed goals and received feedback experienced both improved writing achievement and increased self-efficacy, providing support for the theory that performance-based procedures result in increased self-efficacy.

Bandura (2007) conceptualized self-efficacy as “perceived operative capability” (p. 646). Self-efficacy has come to be defined not as something that one possesses but as beliefs about what one can do. Self-efficacy also involves an assessment of a complex web of beliefs about creativity, effort, accuracy, productivity, possible threats, and a variety of other facets of one’s abilities. In other words, individuals evaluate not only

whether or not they can physically perform a task, but the degree to which they are able to excel at the task. Furthermore, he stated that these performance expectations are a function of reinforcement operations where students develop a standard by which they judge performances. From those standards, the student makes decisions regarding self-rewarding behaviors. If students expect failure in a domain, then the standard for receiving a reward will be much lower than the standard set for a domain in which the students believe they are capable of excelling. Students work to align their expectations with the level of performance required to meet the students' self-prescribed standards.

According to Bandura's (2007) view, motivation is impacted by personal beliefs about ability that are derived from individuals' past experience, thus individuals' level of self-efficacy depends on their past successes and failures, including what significant others have said about these successes and failures (Bandura, 2007). When successes are commonly experienced by individuals within a particular life domain, and when those successes are acknowledged, self-efficacy should improve. On the other hand, when failures are common and interpreted as such by significant others, self-efficacy should be depleted. A meta-analysis conducted by Sitzmann and Yeo (2013) confirmed the impact that past performance has on self-efficacy when analysis revealed that self-efficacy was significantly related to past performances. Elias and MacDonald (2007) studied past performance and academic self-efficacy in college students, and similarly found that past performance was predictive of self-efficacy among college students. Furthermore, self-efficacy accounted for more variance in academic achievement than past performance alone. In a study with elementary school children, Throndsen (2011) also found that past

performances were positively and significantly related to self-efficacy. That is, self-efficacy was higher when success was more common.

Furthermore, Bandura (1994) suggested that when using social persuasion, it is easier to undermine self-efficacy than to build self-efficacy. When significant others suggest that students are incapable of performing academic tasks, the suggestion is likely to have a more profound impact than a suggestion that the student is capable of performing an academic task. The impact is more profound because students are likely to avoid the task when told that they are incapable of successfully completing the task. In this way, the student never receives data that contradict the suggestion that the student is incapable. Kamins and Dweck (1999) studied the impact of criticism and praise in children by setting up pretend tasks and then providing either performance-based criticism or person-based criticism. Those children who received person-based criticism showed a helpless reaction and engaged in self-blame. Bandura (1994) summarized by saying that the ability to visualize themselves succeeding is a necessary component of building self-efficacy, because the ability to visualize success provides a cognitively-based source of motivation.

Bandura (1986) described how individuals' beliefs about themselves can be altered. He suggested that "people's conceptions about themselves and the nature of things are developed and verified through four different processes: direct experience of the effects produced by their actions, vicarious experience of the effects produced by somebody else's actions, judgments voiced by others, and derivation of further knowledge from what they already know by using rules of inference" (Bandura, 1986, p. 27). Bandura suggests that parents, teachers, and school staff can help students increase



their academic self-efficacy for academic pursuits by voicing the opinion to their children or adolescents that they are capable of achieving academic success, and by exposing them to other similar and successful peers.

Studies conducted by Bandura, Barbaranelli, Caprara, and Pastorelli (1996) and Caprara, Pastorelli, Regalia, Scabini, and Bandura (2005) lent support to the idea that others influence students' academic self-efficacy. The 1996 study found that students' academic self-efficacy was increased when parents had high aspirations for their children. Further, the 2005 study found that when parents had high filial efficacy, or efficacy to help their children succeed, students' academic self-efficacy was increased. Furthermore, Schunk (1981) found that social persuasion, in the form of ability feedback, increased self-efficacy more than effort feedback, or feedback that contained information concerning both effort and ability. Schunk's finding supports the theory that social persuasion impacts self-efficacy.

Bandura (1997) proposed that self-efficacy regulates human functioning in cognitive, motivational, and affective realms. He reported that individuals with high self-efficacy are likely to visualize themselves succeeding rather than concentrating on the possibility of failure or on their perceived weaknesses. In addition, perceived self-efficacy is likely to influence how hard individuals will work toward achieving success, the amount of energy they are willing to expend, and their responses to setbacks. Individuals who believe they are capable of coping with a task are less likely to feel anxious, overwhelmed, or threatened. They are also less likely to feel depressed, because they are likely to have stronger social networks and stronger self-esteem. They tend to attract support systems which further assist them to cope with stressful situations.

## **Self-Efficacy in Youth**

Self-efficacy attributions begin developing in infancy and continue to develop throughout childhood as children begin to experience success or failure (Bandura, 1994). When successes occur, children begin to attend to their behavior and to become more competent and efficacious than infants for whom environmental conditions remain the same regardless of their actions. However, effecting change in the environment is not sufficient for developing the foundations for self-efficacy. Instead, infants or children must relate their actions to the changes.

**The role of families in the development of self-efficacy.** Parents play a pivotal role in the development and maintenance of self-efficacy. Parents who provide their toddler children with enriching environments to explore, and who are reactive to their toddler's needs, provide their children with opportunities to further enhance the efficacy they began to develop during infancy (Bandura, 1994). Likewise, adolescents who experience parental support are more likely to have high self-efficacy than adolescents whose parental relationships are unsupportive (Graziano, Bonino, Cattelino, 2009). In their study, Graziano et al. found that increased parental support was related not only to increased academic and social self-efficacy, but also to decreased rates of depression.

Adolescents generally rely on their parents' support to help them to cope with academic demands (Cicognani, 2011). In a 2011 study, Cicognani found that parental support is one of the primary coping strategies used by adolescents who are experiencing school-related stress. Furthermore, students who had high self-efficacy were more likely than less efficacious students to utilize coping strategies, such as confiding in their parents.

Self-efficacy also plays a pivotal role in life-satisfaction for adolescents, as demonstrated in a study by Vecchio, Gerbino, Pastorelli, Del Bove, and Caprara (2007). The authors found that for middle-school students, academic and social efficacy predicted life satisfaction better than academic performance or degree of acceptance by peers. These findings suggest that when adolescents feel able to succeed academically and socially, they are more satisfied with their life.

According to Pajares and Urdan (2006), today's adolescents are involved in a transition from a learning environment in which students were generally passive receivers of information to an electronic age that requires students to be active participants in the learning environment. Further, information is readily available via the internet, but students must possess the efficacy to gain access to and utilize the information available. They are required to possess the efficacy to make transitions from their high school teachers, who are likely to provide access to educational material, to college professors, who are likely to expect the students to gain access to information without assistance. Those students who decide not to attend college will also be expected to transition into an occupational environment that includes much more self-reliance than once was required.

When not in school or the academic environment, adolescents are frequently interacting with their families. Caprara et al. (2005) found that those adolescents who feel efficacious when communicating with their parents were more likely to tolerate open lines of communication with their parents than less efficacious adolescents. Additionally, the family's collective efficacy was higher for efficacious students. Because of the open lines of communication, parents felt more confident in their abilities to perform the role of parent, further enhancing the family's collective efficacy. As is apparent here, the

development of personal efficacy in the adolescent is impacted greatly by each environment the adolescent encounters in daily life (Pajares & Urdan, 2006).

Bong (2008) studied 753 South Korean high school students and found that students' motivation to succeed was heavily influenced by their perception of their environments. Specifically, the types of pursuits adolescents choose to undertake is greatly influenced by their perception of their parents', teachers', and peers' expectations. Students' perceptions of their environment are even more important than the students' actual environment. Their interpretation of the messages conveyed in their environments is an important component of their academic achievement. When teachers and parents convey a message of competence, students will internalize that message. Parents influence students' academic achievement by conveying messages about their confidence in the students' abilities. As parents' and teachers' aspirations change, students' self-perceptions of abilities will also change (Bong, 2008). Furthermore, the quality of the parent-child relationship is a "pervasive force" in students' academic achievement (p. 18).

**The role of teachers in the development of self-efficacy.** Teachers' expectations are related to students' academic performance and attitudes in the classroom. Eccles-Parsons, Kaczala, and Meece (1982) studied teachers' expectations and the impact of those expectations on students. They found that girls were criticized less often than boys, especially boys for whom teachers held low expectations. Furthermore, teachers' expectations were correlated with students' attitudes about school. Teachers' expectations also impact the frequency of rewards and praise children receive (Clark, 1997). Empirical research by Clark found that teachers used information about both ability and effort to

make decisions about punishments and rewards. Students who are perceived to put forth little effort are punished more often than students whose failures are believed to be related to low ability. Further, when teachers perceive children as having little academic ability, they expect those students to fail more often than children who are perceived as more capable.

Further, Rowen, Chiang, and Miller (1997) found that teachers' expectations were directly linked to students' academic achievements. However, teachers' expectations for students impact much more than academic achievement. Rist (1970) studied students' social class, as it related to teachers' expectations, and found that teachers' expectations even impacted students' assignments to groups. Students who were perceived as being from a low socioeconomic status family were assigned to groups with other students who were perceived to have a similar background.

Teachers' expectations have an enduring impact on students' academic performance. De Boer, Bosker, and Van der Werf (2010) measured teachers' expectation bias, or the difference between students' expected and observed ability and students' academic performance. They found that teachers' expectation biases partly mediated the effect of student characteristics on students' academic performance over a period of five years.

A recent study by Sorhagen (2013) measured teachers' expectations for students during 1<sup>st</sup> grade and measured standardized test scores when students were 15 years old. Findings suggested that 1<sup>st</sup>-grade teachers' expectations for students predicted students' standardized test scores at 15-years-old. Further, there were disparities between the impact of expectations of students, between students from affluent homes and those from

low SES homes. The impact of a misperception of ability had a greater impact on students from low SES homes than for more affluent students. The finding held true regardless of whether the misperception was an over-estimation or an underestimation of students' abilities.

A longitudinal study by Gregory and Huang (2013) resulted in similar findings. Students', teachers', and parents' college expectancies were measured during 10<sup>th</sup> grade. Then, four years later researchers asked students to provide information about their post-secondary education status. Researchers found that students', teachers', and parents' expectations during the 10<sup>th</sup> grade were predictive of college attendance at follow-up. Furthermore, they found that when expectations for students were positive, those expectations could be protective of students, increasing the likelihood that at-risk students would attend college.

According to Pajares and Urdan (2006), "Adolescents need to commit themselves to goals that give them purpose and a sense of accomplishment" (p.10). Without self-efficacy, adolescents are likely to become cynical, bored and unmotivated. They become dependent on extrinsic sources of stimulation, such as drugs and promiscuity. With self-efficacy, adolescents develop a sense of purpose and a tool for organizing their lives. They become more likely to cope with difficulties as they arise, rather than to run from difficulty.

A study by Bandura and Schunk (1981) found that heightened self-efficacy was related to proximal, attainable goals. As such, students who feel that their goals are more distant demonstrate less self-efficacy than those who believe their goals are within reach. It is possible that by attending LA GEAR UP camps in university settings, students begin

to view their goals as more proximate because they take steps toward actually attending college.

### **Academic Self-Efficacy**

#### **Predicting Academic Achievement**

Bandura (1997) suggests that individuals who believe they are efficacious are less likely to internalize their perceived academic inabilities, and instead to focus energy on achieving their academic goals and improving social relationships. Furthermore, those students who increase their academic self-efficacy by learning new skills solve problems more readily than their less efficacious counter-parts (Bandura & Schunk, 1981).

Beer (2009) found that GPAs and scores on the Iowa Test of Basic Skills improved significantly after students attended the LA GEAR UP program. In addition, Beer found that high school students who attended at least one of the LA GEAR UP summer camps had significantly higher scores than their non-attending counterparts on the Graduate Exit Exam in both the English Language Arts and Social Studies sections. Beer postulated the LA GEAR UP program increased students' academic self-efficacy which resulted in their improved academic achievement. One of the goals of the current study is to measure academic self-efficacy before and after the LA GEAR UP summer camp.

Bandura (1977) reported that self-efficacy ratings predict future behavior better than past performances predict future behavior (Pajares & Miller, 1994). If self-efficacy predicts future behavior better than past performances, educators should be utilizing academic self-efficacy as a tool for predicting academic performance, rather than using past academic performances to predict future academic performances. Research suggests

that self-efficacious children tend to invest more effort in a task, and they eventually demonstrate higher academic achievement than children with low academic self-efficacy (Bandura, 1982; Bong, 2004; Lane & Lane, 2001).

According to Lane, Lane, and Kyprianou (2004), self-efficacy to pass a course significantly predicts performance in that course. In their study, children's ratings of self-efficacy to maintain the motivation needed to cope with difficulties and intellectual demands was significantly positively correlated with their ratings of self-efficacy to achieve a passing grade in a course. This suggests that by increasing self-efficacy for learning and coping, one may also be able to increase academic performance. If, in fact, students' academic self-efficacy improves in the LA GEAR UP program, then they also will acquire the motivation needed to move past the achievement barriers they have previously experienced in their academic lives.

Bong (2002) found that self-efficacy mediated the effects of goals on achievement. This is in concert with Bandura's (1977) findings that students with high self-efficacy set loftier goals than those with lower self-efficacy. Furthermore, his finding supports the notion that improving self-efficacy is one method for improving achievement. In other words, more efficacious students will set loftier goals and will achieve more academically than less efficacious students who set few, if any, academic goals.

#### **At-Risk Students' Academic Achievement and Self-efficacy**

According to the Louisiana Department of Education (2009), 63.2% of students are considered *at-risk*, meaning that these students reside in economically disadvantaged parts of the state and that their low family income and educational levels impede



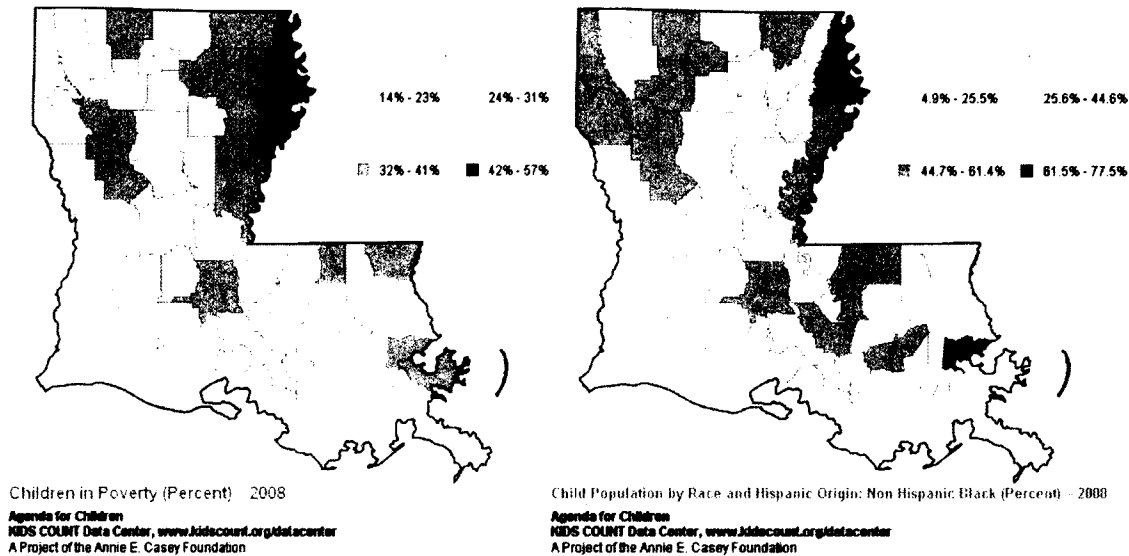
academic success. For minority students there is a difference in graduation rates between those who attend public and non-public schools. Minority students comprised only 43% of the students who graduated from public high schools in Louisiana at the conclusion of the 2006-2007 academic year, despite the fact that 61.2% of the students enrolled in public schools were minority students. In non-public schools, however, 51% of the minority students graduated that same year (Louisiana Department of Education, 2009; The Annie E. Casey Foundation, 2010). In Louisiana, public school students are expected to score at least at the basic level on the Graduation Exit Exam (GEE) in order to be eligible for high school graduation. In 2007, more than 41% of students scored below the basic level on the English Language Arts portion; more than 35% scored below the basic level on the Math portion; more than 43% below basic level on the Science portion; and more than 38% percent below basic level on the social studies portion (Louisiana Department of Education, 2009). These statistics suggest that many students in Louisiana are *at-risk* and experience considerable academic difficulty.

According to Beer's (2009) findings, students from low income areas of Louisiana are less likely than students from affluent areas to be taught core subjects by qualified teachers with teaching certificates and to complete high school. They also are more likely to engage in truancy. With a diminished sense of academic self-efficacy, these *at-risk* students are unlikely to set lofty goals for themselves such as completing high school and enrolling in college programs, and in fact, they are more likely to avoid academic pursuits altogether (Bandura, 1982). By avoiding academic pursuits, students decrease their chances of experiencing any form of academic success, and this in turn further erodes their academic self-efficacy (Bandura, 1982). This cycle then further

increases the risk that students will not only forego college, but also drop out of high school.

There is more evidence that many Louisiana children are at-risk educationally. According to the U.S. Census Bureau (2010) only 74.8% of Louisiana citizens over the age of 25 had high school diplomas, whereas, the overall U.S. rate of individuals living in the United States exceeded 80%. In addition, fewer than 19% of individuals from Louisiana age 25 and older had a Bachelor's degree. In the United States as a whole, nearly 25% of individuals 25 or older have a Bachelor's degree.

No fewer than 14% of children in each of the 64 Louisiana parishes lived in poverty, and 32% or more lived in poverty in 18 of those parishes (State of Louisiana, 2010). The following statistics from the Kids Count organization (The Annie E. Casey Foundation, 2010) were equally dismal for Louisiana: 49<sup>th</sup> in percentage of low-birth weight babies and the share of children in single-parent families; 48<sup>th</sup> in infant mortality; 47<sup>th</sup> in child death rate, the teen death rate, and the percentage of teens who were neither enrolled in school nor were high school graduates; 45<sup>th</sup> in percentage of teens not in school and not working and without secure parental employment; and 44<sup>th</sup> in teen birth rate. The areas in which these rates were highest coincided with the areas which were served by LA GEAR UP. Most of the students who were offered admission into the LA GEAR UP program were minority students who lived in low income households and whose parents had not received any post-secondary education (The Annie E. Casey Foundation, 2010; see Figure 2 below retrieved from [www.kidscount.org/datacenter](http://www.kidscount.org/datacenter)).



From the Annie E. Casey Foundation (2010). Kids Count State by State [data file and maps]. Retrieved from [http://The Annie E. Casey Foundation](http://TheAnnieECaseyFoundation.org), 2010. Reprinted with permission.

Figure 2 Louisiana Child Population by Race and Poverty

These students have experienced few chances to succeed academically and to observe others succeeding academically (The Annie E. Casey Foundation, 2010). It is reasonable to conclude, therefore, that many, if not most of them, have low levels of academic self-efficacy.

### **Task Difficulty and Self-efficacy**

Bandura (1982) reported that highly self-efficacious children, who were presented a task that was described to them as “difficult,” spent more time preparing for the task and achieved higher scores on the task than when they were given a task that was described as “easy.” They spent little effort preparing for the task which ultimately resulted in lower scores on the “easy” task than on the “difficult” task. This suggests that self-efficacious children are not threatened by a difficult task; rather, they are encouraged to strive harder to perform well on the task. Dweck (1986) discussed a similar notion. She reported that students who exhibited adaptive motivational patterns, such as high self-

efficacy, seemed to enjoy a challenge, but students who exhibited mal-adaptive patterns, like low self-efficacy responded to challenges with anxiety and negative self-cognitions. Perhaps, by increasing academic self-efficacy, the LA GEAR UP program promotes campers' motivation to persevere in tasks that they once felt were impossible. They become more apt to set goals such as graduating from high school and attending college despite significant barriers (e.g., cost, lack of support, and ridicule) that they have experienced in the past and may still experience.

Furthermore, Pintrich and Degroot (1990) found that 7<sup>th</sup>-grade students who believed they could achieve academic success were more likely to use the learning strategies taught by teachers when faced with activities students believed to be difficult or uninteresting. Additionally, they reported that efficacious students were more likely to find classroom tasks more interesting and worth learning than less efficacious students. As a result, they were likely to utilize more self-regulatory strategies for coping with academic tasks.

Utilizing participants whose ages were 7 years, 3 months to 10 years, 1 month, who exhibited gross deficits and a low interest in arithmetic, Bandura and Schunk (1981) demonstrated that through skill acquisition, students can improve their self-efficacy and increase their interest in areas of academic learning, including arithmetic. Prior to treatment, there were no significant differences between participants in each treatment condition. At post-test, however, participants in the proximal goal condition reported substantially higher perceived mathematical self-efficacy. There were moderate increases of mathematical self-efficacy for those in the distal goals condition, and modest gains for participants in the no goals condition. Self-directed instruction promoted mastery in all

three groups, but those who set proximal goals showed the greatest gains. Bandura and Schunk (1981) suggested that “Children who gain high self-efficacy through skill acquisition solve problems readily and therefore, need not spend much time on them” (p. 592). Overall, goal proximity affected interest in arithmetic, persistence at difficult tasks, and speed of problem mastery. The findings were summed up as “Children who set attainable goals progressed rapidly in self-directed learning, achieved substantial mastery of mathematical operation, and heightened their perceived self-efficacy and interest in activities that initially held little attraction for them” (p. 595). Findings such as these are important for the current study because LA GEAR UP emphasizes the importance of goal setting.

#### **Environmental Influences on Academic Self-efficacy**

LA GEAR UP participants are less likely to engage in delinquent behavior than non-participants. Specifically, Beer found that they had fewer disciplinary referrals and absences from school (Beer, 2009). Delinquent activities are less likely to occur when adolescents have filial self-efficacy, which is a belief that they can interact effectively with their parents and are more open to parental monitoring and guidance (Caprara et al., 2005).

The parents’ efficacy to effectively influence the adolescent is also important. According to Bandura et al. (2001), parents who believe that they are able to effectively promote their children’s academic pursuits are most likely to positively affect their children’s academic trajectory by expressing high aspirations for them. Expressing high aspirations conveys the message that parents have faith in their children’s ability, and the

parents' repeated expression of their high aspirations is a cornerstone for the development of the children's own sense of personal academic efficacy.

Findings by Frome and Eccles (1998) supported the notion that parents' beliefs about their children's ability are influential factors in determining the types of academic goals that children will set. Not only are parents' beliefs influential, but beliefs have been found to be more strongly related to children's beliefs about ability than children's actual grades. Additionally, children view their grades through the lens of their parents' beliefs. In other words, children determine the accuracy with which grades portray ability based on parents' beliefs about children's ability.

Parents' preconceived notions about their children's abilities are likely to impact children's academic performance throughout the children's lives. Over the course of 12 years, Bleeker and Jacobs (2004) assessed parents' beliefs about their children's academic ability and the impact those beliefs had on their children's academic performance and career choices. Students and parents and teachers of students from 143 6<sup>th</sup>-grade classrooms participated in the study. Bleeker and Jacobs (2004) collected data concerning students' and parents' beliefs on four occasions, during the 1983 school year, 1984 school year, 1988 school year, and again in 1996 when students were between the ages of 24 and 25.

Bleeker and Jacobs (2004) found parents' beliefs about their children's academic abilities, specifically in the areas of Science, Technology, Engineering, and Mathematics impacted the children's academic performance, and later their career choices. Furthermore, children whose parents did not believe that their children were able to perform well academically were likely to pursue less challenging career fields and to hold

less lofty academic goals. Another important finding was that children who were able to perform well academically in a domain, but whose parents did not believe that they were able to perform well in that same domain often would internalize their parents' beliefs, and change their academic goals to suit those beliefs (Bleeker & Jacobs, 2004).

This is a crucial finding because LA GEAR UP provides parents' with opportunities to see their own children and other children similar to their own succeeding academically. As a result, it is probable that the parents will begin to develop the belief that their own children can also succeed. Once this occurs, it is likely that parents will convey that message to their children, who then might internalize the beliefs and behave accordingly. By involving parents in the program, LA GEAR UP may set the stage for lofty goal setting by parents that leads to lofty goals set by children. This, in turn, is likely to increase the probability that children will attempt college preparatory classes and strive to achieve greater academic success.

In the current study, the LA GEAR UP program involved parents in the children's academic lives by inviting them to participate in the Preparing Parents for Possibilities meeting, which focuses on preparing parents to help their children navigate the decision-making process about whether or not to attend a college or trade school (The IDEA Place, 2009). By encouraging the participation of parents, teachers, and children, LA GEAR UP promotes increased efficacy in all three groups. In addition, strengthening relationships between the students and their parents and teachers may improve and promote students' efficacy to avoid self-limiting and even delinquent behaviors.

## Statement of the Problem

The literature about academic self-efficacy suggests that students from low-income families whose goals do not include post-secondary education often have parents and teachers whose academic expectations of them are low (Bandura, 1993). Participants in the LA GEAR UP program are likely to live in low-income areas, and their parents are expected to have low academic aspirations for their children. It is reasonable to conclude, that the low expectations of parents and teachers perpetuate a cycle of low expectations in the students which result in poor academic performance. The LA GEAR UP program addressed these issues by including parents, teachers, and students in its motivational programming.

Previous research (Beer, 2009) conducted with students who attended the LA GEAR UP program indicated that students began to make decisions about whether or not to attend post-secondary institutions, and also began the process of developing college readiness skills, before completing the 7<sup>th</sup> grade. This decision-making process and the development of skills continue through their junior high and high school years. Given this finding, it seems logical that interventions aimed at bolstering academic self-efficacy should begin no later than junior high school. The LA GEAR UP program was a school intervention focused specifically on developing college readiness in students who were enrolled in the 8<sup>th</sup> and 9<sup>th</sup> grades.

In the past, school intervention programs focused very little on the psychological components of academic success. Although very important, simply modifying the *behaviors* related to success may not also address critical *attitudes* underlying the behaviors that lead to continued success. It is likely that the LA GEAR UP program



modifies both student behaviors *and* attitudes in a number of ways: students learn college preparatory skills; student-teacher relationships are improved; and many opportunities are provided for academic success, for seeing similar other youth succeed academically, and for receiving encouragement and reinforcement from others who are close to the student.

Following his analysis of the effectiveness of the LA GEAR UP program, Beer (2009) reported that more research is needed in order to determine if there are outcome differences between LA GEAR UP students who do and do not attend the summer learning camps. Because self-efficacy was purported to increase when students had opportunities for direct mastery experiences, vicarious learning, and social persuasion by similar others, levels of academic self-efficacy between students who did and did not attend the summer learning camps were assessed both before and after the camps. In addition, monitoring the number of disciplinary referrals for all students, and increasing their GPAs, and their college aspirations, as well as parents' and teachers' academic aspirations for each student, are likely major factors in determining whether they attend.

Most relevant studies (i.e., Bandura, 1993; Bandura et al., 1996; Bandura et al., 2001) correlate academic self-efficacy and other behaviors and attitudes. It may be desirable to explore whether or not students' academic self-efficacy actually improves after attending the LA GEAR UP summer camps and participating in the Explorers' Club activities throughout the school year.

Research by Bandura (2001; 2005) was conducted with young students from moderate-income families rather than students who live in areas where there is little access to educational resources. More research is needed to determine levels of academic self-efficacy in minority students who live in impoverished environments (O'Brien,

Martinez-Ponns, & Kopala, 1999). Students in the LA GEAR UP program were members of such a population.

### **Justification**

As young people formulate ideas about who they will become, they are particularly vulnerable to their own experiences of success or failure and to others' interpretations of these events. During this highly influential period of their lives, their days are spent mostly in a school environment, and it is here where many of these crucial success and/or failure experiences occur. Based on Bandura's theory and research findings (Bandura, 1993; Bandura et al., 1996; Bandura et al., 2001; Schunk & Zimmerman, 2007), an investigation into the impact that LA GEAR UP has on attitudes is warranted. For this reason, the current study utilized the school and school-related summer camp environments of junior high and high school students to assess whether academic self-efficacy can be bolstered by school-sponsored activities designed to foster personal success experiences, and whether higher self-efficacy levels, in turn, influence the students' decisions about their academic future.

Based on Bandura and Adams' research (1977), when working to improve self-efficacy it is vital that treatments are based on "performance accomplishments through the aid of participant modeling" (p. 288). Utilizing Bandura and Adams' concept, the current research focused on the provision of self-efficacy building activities, by giving students the opportunity to see other students who are similar to themselves succeed while working to accomplish the goal of preparing for college. In related settings, teachers and parents were taught how to assist the students to achieve a goal, and this was expected to raise their expectations for student achievement. Students also were exposed

to adult participant models of high expectations for them when they participated in LA GEAR UP programs.

In this study, the relationships between student factors, including academic self-efficacy, disciplinary problems, college aspirations, and a variety of efficacy building factors such as parent and teacher expectations, and structured academic and academic self-efficacy building activities were examined. Previous research supports the notion that self-efficacy and GPA are important factors in choosing to attend college as well as succeeding and completing college (Bandura, 2001).

### **Design of the Current Study**

Survey data, including self-efficacy ratings, GPA, disciplinary referrals, and teachers' aspirations were collected both before and after students attended LA GEAR UP camp. Data were collected by the Louisiana Board of Regents and provided to the researcher after students participated in post-test data collection. The Data were de-identified prior to being provided to the researcher.

The design of the current study included an intervention during which the researcher went to two of the northeastern Louisiana schools that participate in LA GEAR UP and explained the career portfolio and the LA GEAR UP website to the LA GEAR UP students at one of their Explorers' Club meetings. The students were taught how to use the career portfolio throughout the year. In addition, students and teachers were asked to work together as a team to complete a task that was based on the information available on the LA GEAR UP website. For this reason, the task was referred to as a "team-building intervention." The goal of the intervention was to help solidify and increase the students' academic self-efficacy and also to increase the teachers' academic

aspirations for the LA GEAR UP students. Bandura and Schunk (1981) found that students, who set academic goals within their reach, reported greater self-efficacy and were more capable of mastering skills than students who did not set goals. The career portfolio is one way that the LA GEAR UP program was designed to encourage students to set attainable academic goals. The intervention was designed to bring students and teachers together in an academic task that provides encouragement and reinforcement for all of them and also provided teachers the opportunity to directly witness motivated LA GEAR UP students working toward an academic goal.

## **Hypotheses**

### **Hypothesis One**

Students who attend LA GEAR UP summer camp and who participate in activities and students who do not attend summer camp will not have significantly different pre-test self-efficacy, teachers' aspirations, disciplinary referrals or GPAs. At post-test, students who attend camp and who participate in other LA GEAR UP activities will have significantly higher self-efficacy, teachers' aspirations, and GPAs than students who do not participate in camp. They will also have significantly fewer disciplinary referrals than students who do not attend camp. Furthermore, students who attend camp and participate in additional LA GEAR UP activities will have higher self-efficacy, teachers' aspirations, and GPAs than students who only participate in camp.

**Justification.** Beer (2009) found that students who attended LA GEAR UP performed better academically and had fewer disciplinary referrals than students who did not attend camp. Bandura (1986) posited that self-efficacy can be altered in a variety of ways, including (a) direct mastery experiences; (b) social-comparative information

conveyed through vicarious experiences; (c) social persuasion; (d) attributional evaluations; and (e) proffered incentives. The opportunities provided by LA GEAR UP meet the above criteria and participation is expected to result in increased self-efficacy.

Margolis and McCabe (2004) found that students developed self-attributions based on past performances. Additionally, past performances impact the value that students place on activities (Bembenutty, 2012). Finally, when students not only develop goals, but also receive feedback about those goals, similar to what they receive when they participate in the Explorers' Club, they experience improved achievement and self-efficacy (Schunk & Swartz, 1993). Finally, if students experience parental support, such as parental involvement in the P3 conference, self-efficacy is increased. Therefore, more involvement with LA GEAR UP is expected to result in higher self-efficacy. This increased participation in LA GEAR UP and Explorers' Club may afford students more opportunities to gain experiences that will strengthen their self-efficacy. Rather than one-time exposure, students gain repeated inoculations of success, rewards, and social-comparative information over the course of one academic year.

Multiple studies (i.e., Barber et al., 2003; Dumais, 2009; Howard & Ziomek-Daigle, 2009; Mahoney et al., 2003) have found that student participation in extracurricular activities and/or school-sponsored activities is related to improved academic achievement. The Explorers' Club is an extracurricular activity that complements the school-sponsored LA GEAR UP camp. Fredericks and Eccles (2006) found that student participation in extracurricular activities was positively related to the number of years of school students completed.

Not only is participation in extracurricular activities linked to improved academic performance, participation is also related to improved behavioral and psychological functioning. Marsh and Kleitman (2002) found that higher levels of participation in extracurricular activities was associated with more time spent on homework, higher parental aspirations, improved self-esteem, and decreased substance use. Bartko and Eccles (2003) similarly found that students involved in extracurricular activities were more likely to engage in prosocial behaviors and were less likely to experience psychological symptoms.

The attributions people make are directly related to the temporal relationship between two events. The more often two events co-occur the more likely people are to perceive a relationship between the two events (Kelley, 1973). Teachers make attributions about their students based on the amount of effort students are perceived to expend on academic tasks. When teachers perceive effort on the part of students, they begin to reward students more frequently (Clark, 1997; Reyna & Weiner, 2001). When teachers see students engaged in Explorers' Club activities throughout the year, they may perceive the students as putting forth more effort and as more motivated than non-participating students. As a result, the attributions teachers make about such students are expected to change. Clark (1997) found that teachers' expectations of failure were lowest for students who were perceived to exert high energy and to have high ability. Teachers' perceptions about students' academic potential was increased when teachers believed their students were exerting effort. More specifically, "... high effort was seen as mitigating the effects of low ability, allowing a boy more potential success" (Clark, 1997, p. 79).

Additionally, as teachers see students succeed more often, teachers' perceptions about students' ability are expected to change (Clark, 1997). Student participation in Explorers' Club activities also may afford teachers more opportunities to see students achieving academic success, because interactions between teachers and students are expected to increase through Club participation. Beer (2009) demonstrated that students who participated in LA GEAR UP achieved higher GPAs than students who did not participate. The more often teachers see students participating in programming and making better grades, the stronger the association may become.

### **Hypothesis Two**

Teacher-sponsors who participate in the team-building intervention with Explorers' Club students at their schools following the 2011 summer camps will endorse significantly higher academic aspirations (at the immediate post-intervention assessment) for students who participate with them in the intervention than for Explorers' Club students in the non-intervention (control) group.

**Justification.** Similarly to students, teachers who see their students succeed and who receive proffered incentives, such as the gift card used in this study, will begin to feel more confident in their students' abilities (Bandura 1986). Teachers' aspirations are impacted by their perception of students' effort and ability, as demonstrated by Reyna and Weiner (2001) and Clark (1997). Teachers develop expectations for students based on the information they have about students' ability, effort (Clark, 1997), and attitudes toward academic pursuits (Eccles, et. al, 1982). During the intervention, teachers will have the opportunity to see their students work together and succeed when the group "wins" a competition, thus increasing teachers' confidence in their students' ability.

Teachers also will gain information about students' attitudes toward academic pursuits. In contrast, teachers will not have the same opportunity with students participating in the control group.

### **Hypothesis Three**

In the post-camp (fall 2011) survey, teachers will endorse significantly higher academic aspirations for students who attend a 2011 LA GEAR UP summer camp than for students who do not attend a camp.

**Justification.** Goddard and Goddard (2001) found that students' academic achievement is improved when teachers' efficacy is improved. LA GEAR UP provides teachers with instructional leadership, feedback, support, and opportunities to see other teachers' succeeding (Beer, 2009). Furthermore students' achievement is improved when they have increased self-efficacy (Schunk & Swartz, 1993) and LA GEAR UP provides opportunities for increased students' self-efficacy through the development of goals, provision of feedback, mastery experiences, and opportunities to see others succeed (Beer, 2009). The development of increased self-efficacy will then positively impact students' effort and persistence (Cook, 2013; Fletcher, 2012). Teachers will observe students' increased academic performance and increased effort and those observations will lead to increased aspirations for students (Clark, 1997; Reyna & Weiner, 2001).

### **Hypothesis Four**

Students who attend camp more than one time will have higher post-camp academic self-efficacy scores and GPAs than students who do not attend camp and students who only attend camp on one occasion.



**Justification.** Students use all available information to make attributions about their ability (Kelley, 1973). Sitzmann & Yeo (2013) and Elias & MacDonald (2007) found that a people's level of self-efficacy was related to their past performances. Specifically, self-efficacy is higher when successes are more common (Thronsen, 2011). Beer (2009) found that even when students were matched for ability, the mean GPA for students who attended camp was higher than the mean GPA for students who did not attend. This may indicate that students who attend camp are more motivated than students who do not attend camp. Furthermore, according to a study by Lopez and Lent (1992), past experience is the strongest predictor of self-efficacy.

Students who attend camp on one occasion develop attributions based on the limited exposure to camp and academic successes they experience during one academic year. However, students who attend camp on more than one occasion are further inoculated because they are afforded more opportunities for success over a period of more than one academic year in addition to more opportunities to see similar others succeed, to gain parental support, and to receive proffered incentives (Bandura, 1994). As a result, students gain more evidence that they are able to succeed and will experience increased self-efficacy.

### **Summary**

Research supports the notion that LA GEAR UP improves students' academic performance and reduces the number of disciplinary referrals students receive (Beer, 2009). Further, Bandura (1986) demonstrated that self-efficacy can be altered when opportunities to have direct mastery experiences, social comparative information, social

persuasion, attributional evaluations, and to receive preferred incentives are available. LA GEAR UP provides students with such opportunities (Beer, 2009).

Additionally, teachers form attributions about students based upon their perceptions about students' effort and ability (Clark, 1997; Reyna & Weiner, 2001). Teachers' perceptions about their own abilities also impact students (Goddard & Goddard, 2001). Specifically, when teachers have high self-efficacy for teaching, students' academic performance improves. Teachers' efficacy improves when teachers receive feedback, support, instructional leadership and opportunities to see other teachers succeeding (Bandura, 1986), similar to those offered at LA GEAR UP. Finally, when successes are common, self-efficacy is higher than when successes are less common.

As a result, the goal of the current study was to examine the impact of participation in LA GEAR UP on self-efficacy and GPA and to study the impact of participation in a student and teacher team-building intervention on self-efficacy and GPA. A final goal of the current study was to examine the impact of multiple exposures to camp and to other LA GEAR UP programming on self-efficacy and GPA. It was hypothesized that students who participated in LA GEAR UP activities and the team-building intervention would endorse higher self-efficacy and would obtain higher GPAs than students who did not participate. Finally, it was hypothesized that teachers would have higher self-efficacy for those students who participated in LA GEAR UP.

## **CHAPTER TWO**

### **METHOD**

#### **Participants**

Participants included 733 middle school and high school students enrolled in the 8<sup>th</sup> and 9<sup>th</sup> grades. The students were approximately evenly distributed, with 284 8<sup>th</sup>-grade students and 317 9<sup>th</sup>-grade students. Students' ages ranged from 13 to 17 years old with a mean age of 15 years old. Approximately half of the students were male (49.9%) and half of the students were female (50.1%).

Students attended rural schools that were labeled "at-risk" by the Louisiana Department of Education (2009). Most of the students who attended the schools were members of minority families who resided in low socioeconomic status areas and whose families were economically disadvantaged. More specifically, 61.9% of students described themselves as African American, while 37.1% described themselves as white. Only 1% of students were self-identified as Asian or "Hispanic/ Latino." Furthermore, 73.9% of students participated in the free or reduced lunch program. Four of the students were homeless at the outset of the study. Participants completed questionnaires as part of the LA GEAR UP program. All students who attended LA GEAR UP schools were asked to complete the measures during the school year.

## **Instruments**

Three instruments were utilized: a measure of students' self-efficacy (Appendix A), a survey of demographic information and information about students' academic achievement and disciplinary history (Appendix B) and a question assessing teachers' aspirations for students.

### **Multidimensional Scales of Perceived Self-Efficacy**

The Multidimensional Scales of Perceived Self-Efficacy (MSPSE; Williams & Coombs, 1996) was used to measure students' academic self-efficacy. The scale is based on Bandura's definition that self-efficacy is individuals' belief that they have the capacity to perform a particular task. The scale consists of 57 items with response options ranging from one (*not well at all*) to seven (*very well*). There is a total academic self-efficacy score comprised of three factors (academic, social, and self-regulation efficacies). Overall, the mean score on MSPSE items is 5.1 and the standard deviation is 1.15. The three factors are subdivided into nine subscales which assess a variety of specific school-related efficacies. The factors and the means and standard deviations of the norming sample are: social resources ( $M = 5.3, SD = .84$ ), academic achievement ( $M = 5.2, SD = .73$ ), self-regulated learning ( $M = 5.1, SD = .86$ ), leisure ( $M = 5.2, SD = .85$ ), self-regulation ( $M = 6.0, SD = .89$ ), others' expectations ( $M = 5.3, SD = .91$ ), social ( $M = 5.9, SD = .92$ ), self-assertive ( $M = 5.6, SD = 1.03$ ), and parental support ( $M = 5.1, SD = 1.14$ ). In the norming study, Williams & Coombs (1996) tested 500 11<sup>th</sup> and 12<sup>th</sup>-grade students, predominantly Caucasian, who were enrolled in an ACT preparatory workshop. Subscale reliability coefficients ranged from .61 to .87. They found that the measure had strong internal consistency as indicated by a Cronbach's alpha reliability coefficient of

.92. Williams & Coombs also found strong discriminant validity, indicating that the academic, social, and self-regulatory efficacies are well discriminated within the scale. The scale was designed to measure multidimensional self-efficacy as it applies to the academic setting, therefore, the total scale score will be used to represent students' academic self-efficacy in the current study.

### **Board of Regents Surveys**

The Board of Regents utilizes two surveys as a measure of LA GEAR UP performance during their annual review for the national Board of Education. The surveys are not standardized assessments, but have been used by the Louisiana Board of Regents to evaluate the overall impact of LA GEAR UP on students from target schools since the inception of the LA GEAR UP program in 2002. They are administered in October every year. Each survey consists of 20 items. One of the surveys was completed by each of the students and one was completed by a parent or guardian of each of the students.

Questions contained in the survey were designed to document students' demographics, academic aspirations, knowledge about college entrance requirements and procedures, study habits, and relationships between parents, students and teachers. Data gathered from these two surveys included students' ages, grades, ethnicities, socioeconomic statuses, the number of times students attended LA GEAR UP camps, the names and numbers of LA GEAR UP events attended by parents and students during the academic year, and students' academic aspirations. The survey data were accessed twice in the current study as the pre-camp survey in the fall of 2010 and the post-camp survey in the fall of 2011.

## **Teacher Aspiration Survey**

Teachers' aspirations were measured by the following question: "What is the highest level of education you expect this student to obtain? (Fill in only one)." Teachers' responses were rated on a 5-point scale, with 1 = "this student will drop out before finishing high school," 2 = "this student will finish high school," 3 = "this student will complete some college but less than a four year degree," 4 = "4-year college degree," 5 = "graduate degree, like a Master's (M.A.), doctorate (Ph.D.), Law (J.D.), or medical (M.D.)." Teachers were asked to provide a rating for each of their students in the pre-camp and again in the post-camp surveys.

## **Procedure**

### **Pre-test Collection of Survey Data**

Survey data were collected annually during each fall term by the Louisiana Board of Regents as a yearly online assessment of all students' progress. Other data collected by the Board of Regents included the number and type of disciplinary reports, students' GPA, and the academic aspirations that the teacher-sponsors of the Explorers' Club have for students in their club. The Board of Regents survey, teachers' aspiration question and data from Bandura's Multidimensional Scale of Perceived Self-Efficacy (MSPSE, 1989) were collected initially during the spring term of the 2010-2011 school year. The Board of Regents surveys were collected during the fall term of the 2010-2011 school year and both the MSPSE and the Board of Regents Surveys were collected again during the 2011-2012 fall term. The time line is represented in Table 1 below. All surveys were administered to students and comparisons between students who did and did not attend the LA GEAR UP summer camps were made.

Table 1

*Schedule of Data Collection*

Data Type	Board of Regents	MSPSE	Teachers' Aspirations	Intervention
Pre-test Data	Fall 2010	Spring 2011	Spring 2011	N/A
Post-test Data	Fall 2011	Fall 2011	Fall 2011	Fall 2011

**Participation in Intervention**

Following the LA GEAR UP 2011 summer camps, the Explorers' Club teacher-sponsors and the student members of the Explorers' Clubs from three different northeast Louisiana schools were asked to participate in an intervention designed to consolidate information learned while at the summer camps and to promote teamwork among teachers and the Explorers' Club students. Only two of the schools completed the intervention. The team-building intervention occurred during one of the regularly scheduled Explorers' Club meetings during the fall of 2011. Club members at each school were divided into two groups. Both groups participated in a 30-minute meeting. The teacher-sponsor and one (control) group of students participated in a 30-minute meeting during which students discussed their experiences at the LA GEAR UP summer camp and were shown the available internet resources provided by LA GEAR UP. At the conclusion of the meeting, students completed the MSPSE and the teachers rated their academic aspirations for each of the students in the control group. During a second group meeting, the second (experimental) group of students discussed the experiences at the LA GEAR UP summer camp, were shown the available internet resources, but also participated in the team-building intervention during their 30-minute meeting. After the intervention and just like for the control group, the teacher-sponsors rated their academic

aspirations for each student in the experimental group while the students completed the MSPSE.

The team-building intervention with the experimental group of Explorers' Club members and their teacher-sponsors consisted of three activities: (1) a description and guided tour by the researcher through the LA GEAR UP website; (2) a discussion of the use of the career portfolio throughout the year; and (3) the completion by the students and teacher-sponsor of a questionnaire concerning LA GEAR UP and college aspirations.

The LA GEAR UP website provided students with links to information about the Explorers' Club, the summer camps, and various educational resources such as a glossary of terms, podcasts of academic lessons in chemistry, grammar, science, and Spanish, as well as information regarding how to apply to college. The career portfolio for each student contained information about school attendance, post-high school intentions, and college preparatory classes needed in order to attend a university. Also included in students' portfolios was a record of their resumé, transcripts, standardized test scores, postsecondary school application forms, career research, College Entrance Exam scores, Financial aid forms and information, vocational class certificates and credentials, letters of recommendation, a place to list references, a place to list awards and honors, and a place to list extracurricular activities. The portfolio was an easily accessible record of all information needed to complete the college application process. Working through the portfolio during the year provided students with information, guidance, direction, and motivation to explore college possibilities. Teacher-sponsors were tasked with assisting students with their portfolios, and the team-building intervention was designed to



promote student-teacher relationships and also to enhance teachers' academic aspirations for students.

Following the tour of the website and the discussion of the use of the students' career portfolios, the students and teacher-sponsor completed the questionnaire created by the researcher, which is related to college preparation and the LA GEAR UP program. An example question is "What subjects are covered on the ACT?" Students and teachers worked together as a team to complete all of the questions on this questionnaire. A harmless method of deception was used to motivate the teacher-sponsor and the students in the intervention groups to work as a team. Students and teachers were told that another school was completing the same questionnaire at the same time, and that the school group who completed the questionnaire the most accurately would be awarded a gift card for a pizza party.

After the questionnaire was completed by the group, the researcher used a cell phone to call a confederate to ask "how accurately did the students at the competing school complete the questionnaire?" This was done in the presence of the students and the teacher-sponsor. After ending the call, the researcher informed the group that its members had completed more questions accurately than the competing school and that the group had won the gift card for the pizza party because of the group's hard work together.

The goal of the intervention was to require the teachers and students to work together toward an academic goal, and to provide encouragement and reinforcement for reaching the goal together, in order to increase the students' academic self-efficacy as well as the teachers' aspirations for the students.

### **Post-test Collection of Survey Data**

Prior to returning to one of the 2012 LA GEAR UP summer camps, students were administered the Board of Regents Survey and the MSPSE again as the *post-test* surveys. MSPSE scores, GPA, number of disciplinary referrals, and student, parent, and teacher college aspiration scores were compared between students who participated in one of the 2011 LA GEAR UP summer camps plus the team-building intervention and those who participated only in the 2011 LA GEAR UP summer camps.

### **Final Collection of Data**

The data collected through the 2010 and the 2011 administration of the Board of Regents Surveys and the MSPSE were added to the database in the LA GEAR UP office at Louisiana Tech University. The database was accessible only by employees of the LA GEAR UP program. All information from the Board of Regents database, as well as all data collected from all measures administered during the study, was de-identified to ensure privacy and confidentiality. Each participant was given an identifier number for the purpose of matching pre-camp data, intervention data, and post-camp data.

After all data were collected by the Board of Regents, added to the database in the LA GEAR UP office at Louisiana Tech University, de-identified, and assigned an identifier number, the data were electronically provided to the researcher on a Universal Serial Bus Drive (USB) for the purpose of this study.

### **Experimental Design**

The design is considered quasi-experimental, because it was not possible to assign participants to groups. Rather than assign students to groups prior to data collection, students self-selected which activities they would complete. Because non-random

assignment based on self-selection impacts the study's internal validity, it was important to employ compensatory methods such as determining pre-test group differences. After all data were collected, students were assigned to groups based on their level of participation. Students were placed into one of four groups: No LA GEAR UP, Camp Only, and Camp plus other activities, Camp plus P3 participation and other activities. This study was approved by the Human Use Committee (Appendix C).

### **Hypotheses Testing and Data Analyses**

Hypothesis One was tested using several statistical techniques. Two separate one-way MANOVAs were utilized to determine if there were statistically significant differences in self-efficacy, as measured by total scores on the MSPSE, and grade point averages for students who participated in LA GEAR UP and for students who did not participate. One MANOVA was utilized to determine if pre-test differences were present and a second MANOVA was utilized to determine if post-test differences were present. The dependent variables were self-efficacy and GPA and the independent variable was degree of participation in LA GEAR UP activities. Three groups were compared: No Camp, Camp Only, and Camp plus at least one other activity.

A one-way MANOVA was used to determine if there were significant differences in the number of disciplinary referrals received by participating students and non-participating students. The dependent variables were number of suspensions and expulsions. The independent variable was participation in LA GEAR UP.

Hypotheses Two and Three were tested using two separate independent t-tests. The first t-test was used to determine if there were statistically significant differences between teachers' aspirations for students who participated in LA GEAR UP and those

who did not participate. One t-test addressed pre-test differences and the second t-test addressed post-test differences. The dependent variable was teachers' aspirations and the independent variable was participation in LA GEAR UP. It is important to note that because of the small number of participants in the intervention phase of the study, that group was collapsed into the group of students who had participated in multiple LA GEAR UP activities.

Hypothesis Four was addressed using a one-way MANOVA to determine if there were statistically significant differences in self-efficacy, as measured by the total score on the MSPSE, and GPA for students who had not attended camp, students who had attended camp on one occasion, and students who had attended camp on multiple occasions. The dependent variables were self-efficacy and GPA and the independent variable was participation in self-efficacy.

### **Summary**

Participants included 733 "at-risk" middle school students whose ages ranged from 13 to 17 years-old. Data collected included students' self-reported self-efficacy scores, students' GPA, the number of disciplinary referrals received, and teachers' aspirations for students. Students' self-efficacy was measured by the MSPSE. Additional data were collected by the Board of Regents during their annual survey. Students and teachers participated in a team-building intervention designed to encourage students and teachers to work together toward achieving a common goal. Data were collected both prior to students attending camp and following camp. After all data were collected, they were entered into the LA GEAR UP database at Louisiana Tech University, de-identified,

and assigned an identifier number. The de-identified data were then provided to the researcher for data analyses.

## **CHAPTER THREE**

### **RESULTS**

Originally, 791 cases were included for data analysis. However, data from 12 participants were excluded from the analysis due to missing data. Students were excluded from the analysis if they omitted more than half of the items on the MSPSE and/or there was no information available concerning their level of participation in the LA GEAR UP program. Additionally, data from 46 participants were excluded from the analysis due to multivariate outliers, as determined by Mahalanobis distance. After exclusion of a total of 58 cases, 733 cases remained. It is of note that in many cases, individuals completed surveys for one year but failed to complete them the second year. Additionally, some participants failed to provide adequate identifying information. As a result, the number of participants included in each level of analysis varied, depending on whether information about a particular variable was available for both the pre-test and the post-test.

All pre-test data were collected prior to participation in camp and post-test data were collected during the fall, following camp. All students were eligible to participate in all LA GEAR UP activities. That is, they were not initially assigned to groups. Instead, students self-selected which activities they would pursue and then during data analysis they were assigned to groups based on the activities they had completed.

Furthermore, some students failed to provide sufficient identifying information at either pre-test or at post-test. As a result, their scores could not be matched for analysis. Also, students were attending middle school when data analyses began, but transferred to high school the following academic year. This resulted in attrition from the study.

Two separate one-way MANOVAs were used to test hypotheses one, two, and three. Originally, students were divided into four groups based on their degree of participation in the LA GEAR UP program. Group One included students who did not participate in LA GEAR UP summer camp, Group Two included students who attended camp, Group Three was comprised of students who attended summer camp and who participated in the Explorers' Club during the school year and Group Four was comprised of students who participated in summer camp, Explorers' Club and the team-building intervention and/or parent participation in the Parenting for Possibilities program. However, only one student's parents participated in the Parenting for Possibilities Program. For this reason, Groups Three and Four were collapsed into one group. Dependent variables were self-efficacy score, as measured by the MSPSE, GPA reported by the school, and teachers' aspiration scores obtained through the Board of Regents Survey. Group membership was based on students' degree of participation at the final data collection.

### **Results of Hypothesis One**

A one-way MANOVA was conducted to determine if there were pre-test differences in students' total self-efficacy scores on the MSPSE and GPAs from the Board of Regents Surveys. Data screening indicated that the distribution was non-normal. In order to account for the non-normal distribution, the degrees of freedom were adjusted.

As reflected in Table 2, students' pre-test self-efficacy ( $M = 301.69$ ), GPA ( $M = 2.02$ ), and teachers' aspirations ( $M = 2.94$ ) for students were compared. Mean self-efficacy scores for the three groups were: Group One ( $N = 98$ ;  $M = 301.27$ ), Group Two ( $N = 126$ ;  $M = 302.48$ ), Group Three ( $N = 30$ ;  $M = 307.68$ ). Mean GPA for Group One was 2.28, for Group Two was 2.08, and for Group Three was 2.33. However, there were no significant differences between groups, with Wilk's Lambda  $F(4, 550) = .73, p = .58$ .

Table 2

*Pre-test Comparison of Mean Self-Efficacy Scores and GPAs Between Groups*

Experimental Groups	N	Self-efficacy	GPA
Group 1 (No Camp)	98	301.27	2.28
Group 2 (Camp Only)	126	302.48	2.08
Group 3 (Camp +1 activity)	30	307.68	2.33
F (4, 550) = .73, NS			

A second one-way MANOVA was performed to determine if there were differences between groups at the post-test survey. At the post-test survey, analyses of dependent variables required eliminating one group, because only one student who did not attend LA GEAR UP completed all measures and only one student who participated in the team-building intervention completed all measures. Two groups remained for comparison: those students who had completed LA GEAR UP summer camp and those who had participated in summer camp and Explorers' Club. Similar to the initial analysis, the dependent variables were GPA and academic self-efficacy as measured by the overall score on the post-camp MSPSE.

As reflected in Table 3, students' post-test self-efficacy ( $M = 321.34$ ) and GPA ( $M = 2.79$ ) for students were compared. Mean self-efficacy scores for the two groups



were: Group One ( $N = 307$ ;  $M = 303.47$ ) and Group Two ( $N = 79$ ;  $M = 324.09$ ). Mean GPA for Group One was 2.52 and for Group Two was 2.93. There were significant differences between groups, with Wilk's Lambda  $F(2, 383) = 12.34, p < .01$ . There was a weak effect with partial  $\eta^2 = 0.06$ . Self-efficacy scores were significantly higher for students who participated in Summer Camp and an additional activity than for students who participated in camp only ( $F(1, 384) = 11.88, p < .01$ ). There was a weak effect with partial  $\eta^2 = 0.03$ . GPAs of students who were involved in LA GEAR UP and at least one additional activity were significantly higher than GPAs for students who participated in camp only ( $F(1, 384) = 17.01, p < .01$ ). There was a weak effect with partial  $\eta^2 = 0.04$ .

Table 3

*Post-Test Comparison Between Groups*

Experimental Groups	N	Self-efficacy	GPA
No Camp (group eliminated)	1		
Group 1 (Camp Only)	307	303.47	2.51
Group 2 (Camp +1 activity)	79	324.09	2.93
Camp + Team Building (group eliminated)	1		
* $p < .01$		$F(1, 384) = 11.88^*$	$F(1, 384) = 17.01^*$

A third one-way MANOVA was used to determine if there was a significant difference in number of suspensions or expulsions, based on students' participation in LA GEAR UP. Three groups were compared: Group One included students who had never participated in LA GEAR UP summer camp, Group Two included students who had participated in camp only, and Group Three included students who had participated in

camp and one additional activity. There was no difference in the number of suspensions students received, based on their degree of participation in LA GEAR UP programming  $F(4, 718) = 1.15, p = 0.33$ . It is important to note that only 66 out of 773 students were suspended during the first year and 90 during the second year.

### **Results of Hypotheses Two and Three**

Two separate independent t-tests were conducted to determine if there were differences in teachers' aspirations scores for students who participated in summer camp only and students who attended summer camp and participated in at least one other activity. At pre-test, teachers' aspirations for students who only participated in summer camp ( $M = 2.83$ ) were not significantly different than students who participated in summer camp and one additional activity ( $M = 2.95; t(319) = -0.92, p = .75$ ). At post-test, however, teachers' aspirations for students did differ depending on students' level of participation in LA GEAR UP. Students who participated in summer camp only had mean scores of 2.83, while students who participated in summer camp and at least one additional activity had mean scores of 3.97. The difference between the groups was significant ( $t(43) = -3.56, p < .01$ ).

### **Results of Hypothesis Four**

A fourth one-way MANOVA was conducted to determine if participating in camp on multiple occasions impacted self-efficacy scores and GPA. There were three groups included in the comparison, Group One ( $N = 337$ ) included students who had never attended camp. Group Two ( $N = 30$ ) included students who attended camp on one occasion and Group Three ( $N = 18$ ) included students who had attended camp on two occasions. There were significant differences with  $F(6, 762) = 3.44, p < .01$ , as reflected

in Table 4. The effect was strong with partial  $\eta^2 = 0.95$ . More specifically, students' self-efficacy scores were significantly different, based on how many times they had attended camp ( $F(2, 382) = 6.19, p < .01, \text{partial } \eta^2 = 0.03$ ). Students who had never attended LA GEAR UP summer camp ( $M = 304.77$ ) had lower self-efficacy scores than students who had attended one summer camp ( $M = 327.41$ ) and students who had attended two summer camps ( $M = 335.22$ ). Additionally, there were significant differences in GPA between students based on the number of times they had attended camp ( $F(2, 382) = 5.63, p < .01, \text{partial } \eta^2 = 0.03$ .) GPA for students who had never attended camp ( $M = 2.55$ ) was lower than GPAs for students who attended camp on one occasion ( $M = 2.95$ ) and those who attended camp on two occasions ( $M = 2.97$ ).

Table 4

*Effect of Multiple Camp Experiences*

Experimental Groups	N	Self-efficacy	GPA
Group 1 (No Camp)	337	304.77	2.55
Group 2 (1 Camp)	30	327.41	2.95
Group 3 (2 camps)	18	335.22	2.97
* $p < .01$		$F(2, 382) = 6.19^*$	$F(2, 382) = 5.63^*$

**Summary**

Two separate one-way MANOVAs were performed to determine if there were differences between students' self-efficacy scores and GPAs. Three groups were compared: No camp, Camp only, and Camp plus at least one activity. There were no significant differences between groups at pre-test; however, there were significant differences at post-test. Students who were most active in LA GEAR UP had the highest

self-efficacy scores and GPA, while students who did not participate in LA GEAR UP had the lowest self-efficacy scores and GPA. A third one-way MANOVA was performed to determine if there were differences between groups, with regard to the number of disciplinary referrals students received. There were no significant differences between groups.

Two independent t-tests were performed in order to address hypotheses two and three. There were no significant differences between teachers' aspirations for students who participated in LA GEAR UP activities and/or the intervention at pre-test. At post-test, significant differences were found, with teachers reporting the highest aspirations for students who attended camp and participated in at least one activity and the lowest aspirations for students who did not attend camp.

A third one-way MANOVA was performed to determine if there were significant differences in the number of disciplinary referrals for students who participated and for students who did not participate. There were no significant differences. Finally, a fourth one-way MANOVA was used to determine if there were significant differences in self-efficacy and GPA for students who had never attended camp, students who had attended camp on one occasion, and students who had attended camp on multiple occasions. There were significant differences between groups, with students who attended camp on multiple occasions reporting the highest self-efficacy and obtaining the highest GPA. Students who never participated in camp scored the lowest on measures of self-efficacy and GPA.

## **CHAPTER FOUR**

### **DISCUSSION**

#### **Findings**

This study examined the effectiveness of LA GEAR UP in promoting self-efficacy, improved academic achievement, reduced disciplinary referrals, and increased teachers' aspirations for students. Hypothesis One was partially supported in that students who participated in LA GEAR UP had higher self-efficacy, GPA, and teachers' aspirations at post-test, but their scores were not significantly different at pre-test. However, there was no statistical significance in the number of disciplinary referrals received based on participation in LA GEAR UP. Hypotheses two and three were tested simultaneously, because students who participated in the intervention were included in the group with students who participated in camp plus another activity, rather than a group by themselves.

Consistent with the hypothesis, there were no significant differences at pre-test, but at post-test, there were significant differences between students who participated in LA GEAR UP and students who did not. Finally, hypothesis four was supported. Students who participated in LA GEAR UP camp on two occasions demonstrated the highest self-efficacy and GPA. Students who did not attend camp demonstrated the least self-efficacy and the lowest GPA.

The results of this study suggest that participation in LA GEAR UP is academically beneficial for students. Not only were GPAs higher for students who participated in GEAR UP programming than for students who did not participate, but participating students also experienced psychological changes that resulted in stronger beliefs that they will succeed academically. Supplementing camp with Explorers' Club activities seems to strengthen students' expectations for success and to increase teachers' expectations for students. Unfortunately, the direct impact of the team-building intervention could not be examined; however, it is clear that when students choose to become involved in multiple aspects of the program, they experience increases in their academic self-efficacy, GPA, and teachers' aspirations.

Furthermore, multiple exposures to LA GEAR UP and/or participation in multiple components of LA GEAR UP amplify the results of the program. Although one exposure to LA GEAR UP is helpful one exposure does not sustain as well as LA GEAR UP plus other activities, such as Explorers' Club. The Explorers' Club, Counselor Workshop and the Preparing Parents for Possibilities (P3) conference may reinforce the impact of the program. So rather than one exposure, students' success is reinforced throughout the school year and then further strengthened when students return to camp the following year.

Moreover, LA GEAR UP sets the stage for proximal goal setting and helps students to view their goals as more proximal. During camp, students are taught what steps must be taken each year in order to eventually apply to college. Rather than a distal goal of college attendance, students develop more proximal goals such as taking the ACT and enrolling in and passing college preparatory classes. Further, as Throndsen (2011)

found, self-efficacy is increased when successes are common. As the current study shows, when students have increased participation in LA GEAR UP, either by participating in multiple camps or when participating in other LA GEAR UP activities, they have multiple opportunities to receive feedback about their goals so that they can readjust accordingly. Schunk and Swartz's (1993) finding that the development of goals and the provision of feedback result in more academic successes and improved academic achievement suggest that LA GEAR UP may contribute to students' success in that way.

Lopez and Lent (1992) found that when comparing sources of self-efficacy, past performance is the strongest predictor of self-efficacy. So, students' academic success during the school year and, as the current study demonstrates, positive experiences at camp may strengthen self-efficacy. Further, when they attend camp multiple times, students may be able to utilize information based on their improved academic achievement over the course of multiple years, rather than one isolated year.

This study adds support to the findings that participation in extracurricular activities is positively related to academic performance and college attendance (Barber et al., 2003; Dumais, 2009; Howard, Ziomek-Daigle, 2009; Mahoney et al., 2003). LA GEAR UP camp is a school sponsored activity that occurs each summer. Students also are offered opportunities to participate in conferences and in the Explorers' Club during the school year. These extracurricular activities may complement LA GEAR UP in such a way that self-efficacy and academic performance improves.

The more often students have fun in an academic context, the weaker the association between anxiety and school may become (Kelley, 1973). When students attend camp, they are given opportunities to swim and to participate in other fun activities

(Beer, 2009). These “fun” experiences occur in an academic context. So, students may begin to perceive a relationship between fun and academia, rather than anxiety or worry and academia. Brophy (1998) found that when students experienced hopelessness in school, they had often experienced anxiety provoking situations at school. When students begin associating academia with fun, their anxiety may begin to dissipate in other academic settings, setting the stage for a potential increase in self-efficacy. This study may strengthen these findings because students engage in “fun” activities and, as this study demonstrated students experience increased self-efficacy and increased academic achievement after attending LA GEAR UP camp.

LA GEAR UP also provides students with mastery experiences, as they complete projects at camp, with vicarious experiences of success as they see other students succeed and receive rewards for their success, have opportunities to receive rewards, and have opportunities to meet with counselors and professors who are supportive of students’ academic pursuits (Beer, 2009). “Persistence in activities that are subjectively threatening, but in fact relatively safe produces, through experiences of mastery, further enhancement of self-efficacy and corresponding reductions in defensive behavior” (Bandura, 1977, p. 191). This study provides evidence that each time students attend camp, they receive more exposure to these sources of self-efficacy and so their self-efficacy may be strengthened further.

Teachers’ aspirations for students are impacted by teachers’ perceptions about students’ effort and ability (Clark, 1997; Reyna & Weiner, 2001). When teachers see students exerting effort at camp and then see them succeeding in the classroom after camp, teachers may expect further success from those students. Further, teacher



workshops may increase teachers' aspirations for their students. Goddard and Goddard (2001) found that within schools, the sense of collective efficacy is higher when schools foster the belief that teachers and students can succeed. Teachers' personal efficacy is positively related to schools' collective efficacy. Students' academic performance is then impacted by teachers' beliefs that students can succeed. Schools impact teachers, teachers impact students, and students' performances are feedback for schools and teachers. Furthermore, Calik et al. (2012) found that instructional leadership was positively related to teachers' efficacy and collective agency. This study lent support to the finding that teachers' perceptions were impacted by their perceptions about students' effort, because teachers endorsed higher aspirations for those students who participated in LA GEAR UP than for non-participating students.

The results of this study confirm previous findings that LA GEAR UP improves academic performance. Additionally, the results show students experience increased self-efficacy that may aid them in their future academic pursuits. The observed increase in self-efficacy may provide a partial explanation of how participation in LA GEAR UP benefits students and their GPA. Specifically, students are more likely to exert effort at school and to persist when they face challenging material (Lent et al., 1984). Rather than shying away from college, they are likely to explore new academic options and to exert more energy when working on their homework and class work (Bandura et al., 2001). They may find school to be a more valuable experience (Bembenuddy, 2012).

### **Relevance of Findings**

Reciprocal determinism suggests that every aspect of people and their environments affects every other aspect. "How people interpret the results of their own

actions informs and alters their environments and the personal factors they possess, which, in turn, inform and alter future actions. This is the foundation of Bandura's conception of reciprocal determinism, the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocity" (Pajares, 1996, p. 340). LA GEAR UP may change the students' environments, by involving the students and teachers, and attempting to involve parents. Students gain feedback during the summer when they attend camp and during the school year when they participate in Explorers' Club. Teachers receive feedback at Counselor Workshops. Each person then uses the information to adjust their behavior accordingly. As teachers and students adjust their goals and expectations, their behavior may change.

The LA GEAR UP counselor workshop may provide teachers with opportunities for increasing their own efficacy beliefs, such as opportunities to meet teachers who have successfully taught LA GEAR UP students in similar work environments, opportunities to receive feedback, and opportunities to receive instructional leadership (Beer, 2009). As teachers are exposed to success stories concerning other students who participated in LA GEAR UP, teachers' aspirations for students who attend camp may increase. Then, teachers may begin to convey the message that they believe students can achieve academic success. As a result, students may begin to internalize their teachers' beliefs about their abilities.

Furthermore, observing students participating in Explorers' Club activities might convey the message to teachers that students are exerting more effort and are more motivated than non-participating students. Clark (1997) found that teachers' perceptions

about effort mitigate the impact that teachers' perceptions about ability have on teachers' expectations for students' future success. This may partially explain teachers' increased aspirations for students who participate in LA GEAR UP activities. Furthermore, teachers who sponsor LA GEAR UP may have more opportunities to interact with Explorers' Club participants than they have with non-participating students. Moreland and Zajonc (1982) studied familiarity and found that participants rated more familiar people as more likeable than non-familiar people. Perhaps familiarity impacts not only how much teachers like students, but also teachers' aspirations for students.

This study confirms that LA GEAR UP is a useful program that may help students living in poverty to overcome the socioeconomic barriers they face. LA GEAR UP participation appears to result in higher levels of self-efficacy and higher grade point averages for students. This finding that self-efficacy is increased may provide a partial explanation for the academic advancement seen in LA GEAR UP participants. These findings are relevant and important because they support previous findings that LA GEAR UP is effective and extend those findings by suggesting that a psychological mechanism, that is self-efficacy, may contribute to students' success. Furthermore, this information is relevant because LA GEAR UP can use findings such as these to modify their program, so that there is a greater focus on the development of self-efficacy, more teamwork between teachers and students, and more incentives for parents to participate. Greater self-efficacy and academic achievement increase the potential that these students will graduate high school and possibly pursue post-secondary education. LA GEAR UP participation results in "Rewards for Success," which are scholarships that may also

make post-secondary education more likely for these lower socioeconomic status students.

Students who participated in the study were living in homes where there was little access to financial resources. Many of them participated in the free or reduced lunch program. These students are most likely to drop out of school and begin to participate in high risk behaviors such as sexual promiscuity, drug use, and illegal behaviors (Lopez et al., 2008). Students reside in four rural parishes in Louisiana where a minority (5.6%-8.8%) of individuals graduate from college with a Bachelor's Degree. In fact, between 33.4% and 38.6% fail to graduate from high school (Eisenstadt, 2011). Furthermore, the percentage of people living below the poverty line in the United States is 14.3% and in Louisiana is 17.6%. In contrast, between 20.8% and 26.1% of individuals living in these parishes live below the national poverty level. These statistics are a bleak reminder that students in these areas face a long and difficult road if they are to attain educational success.

It is apparent that the stakes are high with regard to the success or failure of LA GEAR UP, because despite the purported purpose of improving academic performance, participation in LA GEAR UP has a ripple effect that can promote improved psychological health among parents and students. Targeted students are at increased risk for drug use and sexual promiscuity as well as a variety of other high risk behaviors (Lopez et al., 2008). The risk of drug use among adolescents is increased by low self-efficacy, parental drug use, peer drug use, poor or deteriorating academic performance, high familial conflict, and excessive "free time." (Epstein, Botvin, Doyle, 2009; Evans, 1999; Lopez et al., 2008; Vasters & Pillon, 2011)." As exemplified previously, the

environment is ripe for student failure. It is also clear that LA GEAR UP provides students with an opportunity to develop several protective factors that can change students' life trajectories. Students' self-efficacy increases, they have less "free time," and their academic performance improves.

Epstein and colleagues (2009) reported that students with high self-efficacy, in terms of general ability to learn new skills, reduced the likelihood that students would engage in poly-substance use. Like many other researchers, their findings supported the notion that parental involvement and parental attitudes are directly related to adolescents' decisions about whether or not to engage in drug use. Similarly, peer attitudes and drug use is related to adolescents' decisions to use drugs.

Although LA GEAR UP's purported purpose is to improve academic performance, the results of this study suggest there may be ancillary benefits. When students become engaged in school and experience academic success, they may be less likely to engage in drug use and other risk-taking behaviors. Lower socioeconomic status students are at increased risk for drug use and sexual promiscuity as well as a variety of other high risk behaviors (Lopez et. al., 2008). Poor school functioning and peer alcohol and drug use were directly associated with early drug use.

LA GEAR UP may provide a mechanism for bridging the gap between students who live in low socioeconomic status areas and their educators. Summer camp provides an opportunity for students to spend one-on-one time with university professors and other students who hope to one day attend college. Explorers' Club provides students with opportunities to become better acquainted with teachers who are acting in the role of Explorers' Club sponsor. Furthermore, LA GEAR UP provides parents with an avenue

for becoming connected to their children's academic lives; however, parents did not take advantage of those opportunities during this study.

### **Limitations**

One limitation of the proposed study is the inability to randomly sample participants from the school population. Students who participated in LA GEAR UP programs were self-selected. Each year, including the year of the study, students choose whether or not to participate in LA GEAR UP summer camps and subsequent school activities during the year. Data analyses suggested that there were no significant differences among the dependent variables (self-efficacy, GPA, teachers' aspirations, and suspensions/expulsions) at the outset of the study. It is possible that there are other personal characteristics that contribute to a students' decision and render the groups different at the outset of the study; however, these characteristics were not measured or found in this study. After the study's hypotheses were proposed and approved, the state's data collection procedures were changed, preventing examination of the impact that the program has on students' and parents' academic aspirations.

Only a small subset of LA GEAR UP students from the northern region of Louisiana was eligible to participate in this study; therefore, the results may have limited generalizability. Most of the students reside in small, rural communities and attend relatively small schools. Also, there are inherent problems with self-report data, as it is impossible to determine the veracity of responses.

With regard to studying teachers' aspirations, only those teachers who are Explorers' Club Sponsors were eligible to participate in the study. This is problematic because, in some cases, these teachers' interactions with participants were limited to

Explorers' Club activities, rather than daily interaction with students in a classroom setting. However, teachers were afforded more exposure to students participating in Explorers' Club than non-participating students. It is possible that teachers' aspirations for non-participating students were impacted by their limited exposure to non-participating students. Data collected in this study was also limited to one teacher for each student, rather than data from multiple teachers for each student.

Finally, LA GEAR UP has mechanisms in place that are designed to promote interaction between teachers, students, and parents. However, one problem encountered in the current study, was the lack of parental participation in the Parenting for Possibilities Program (P3). It is crucial for parents to become involved and invested in their children's educational pursuits (Graziano et al., 2009).

### **Suggestions for Future Research**

While the aforementioned results sound promising, if parents do not engage in the program, students may not experience all of the potential benefits of LA GEAR UP. Future research should study ways of helping parents to become engaged within the home school as well as in extracurricular activities. It seems necessary to increase parents' social capital if they are ever to become active participants' in their children's lives. Future studies examining the characteristics of parents who do engage in the program, as opposed to parents who are not engaged would be helpful in determining how the LA GEAR UP program might become more appealing for parents. Specifically, it would be helpful to know if the parents who are participating already have higher aspirations and expectations for their children.

Furthermore, parenting self-efficacy is an area in need of study, with regard to this population. If parents are feeling incapable of helping their children to succeed academically, it is likely that like their children, they avoid the activity in order to avoid failure. Rather than attend the program and confirm their fears that they are unable to help their children, parents may avoid attending at all and pursue those activities for which they feel efficacious. Parents feel as though they are incapable of learning the tools needed to help their children succeed, so instead of approaching the educational environment, they begin to feel anxious, overwhelmed, and even threatened because they lack the efficacy needed to succeed (Bandura, 1997).

Research has shown that children often model themselves after their parents (Graziano et al., 2009). As such, academic avoidance is likely a generational problem that needs to be addressed in a more systemic way. Stated differently, studying students alone is insufficient. Students' academic progress and self-efficacy must be studied in conjunction with their home and school environments.

Enticing parents to become active participants in the academic lives of their children may be challenging. It is necessary to find a way to alleviate parents' anxiety, promote unity between the community and the educational system, and to help parents' to gain enough skills so that they feel efficacious to manage their own lives and efficacious to parent their children. This issue may be addressed through research of different incentive programs used to motivate parents to become more active in their children's academic lives. Perhaps it would be useful to examine the differences between programs that provide scholarships to students to programs that provide incentives, like gift cards, directly to parents.



One suggested alternative for discovering ways of getting parents engaged in their children's academic lives is to begin looking to the adolescent drug use literature. Within that literature, there are many promising programs that are successfully engaging parents in treatment (Aslund & Nilsson, 2013). Because education is impacted by adolescents' entire environment, taking a more holistic approach could provide new and innovative methods of helping parents to overcome their fears and become active participants in the academic process.

In the past, LA GEAR UP has used the Career Portfolio. During this study all students were given a copy of the Career Portfolio, but no data concerning usage was collected. Future research might utilize such a tool, or perhaps a modified version, and determine if it would be helpful in setting goals and tracking students' progress. Goal setting is a crucial component in the development of self-efficacy; however, long-term goals are not as effective in increasing self-efficacy as less distant short-term goals.

Short term goals provide students with many opportunities to see that their effort is "paying off." Furthermore, if the goals are set within the Explorer's Group setting, then the goals can be incentivized. That is, students can be rewarded externally for achieving their sub-goals. Additionally, teachers will have the opportunity to teach students how to reward themselves for meeting sub-goals (i.e. if I learn to multiply before my math exam, then I can watch an extra hour of television).

Each Explorer's Club meeting is an opportunity for students and teachers to interact and to discuss the students' progress and changes that may need to be made either in their method of attainment, or in the goal itself. Teachers are able to give students' feedback about their goals and their progress.

For the purpose of this study, teachers' aspirations were collected from only one teacher, the Explorers' Club sponsor. Future studies might utilize data from a broader array of teachers. Such a study might expand knowledge about how teachers' aspirations for students change, as a result of participation in LA GEAR UP.

Future research may explore the specific career aspirations of students and their efficacy to be successful in those fields, rather than students' academic self-efficacy. It might be interesting and helpful to take into consideration specific academic skills such as achievement in areas that would be related to specific career paths, such as investigating the relationship between math and science achievement, aspirations to work in a science-related field, and career self-efficacy. Furthermore, it might be interesting to correlate career aspirations and subject specific achievement to the camp students choose during their second and subsequent trips to a LA GEAR UP camp

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**APPENDIX A**  
**MULTI-DIMENSIONAL SCALES OF PERCEIVED**  
**SELF-EFFICACY**

Please answer each question as honestly as you can. Circle the number on the rating scale that best represents how well you think you can do what the question asks, with one being the least well and seven being the most.

**Peer pressure** is pressure from people your age to do what they are doing.

1	2	3	4	5	6	7
Not well at all		Not too well		Pretty well		Very well

1. How well can you get teachers to help you when you get stuck on school work?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

2. How well can you get another student to help you when you get stuck on homework?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

3. How well can you get adults to help you when you have social problems?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

4. How well can you get a friend to help you when you have social problems?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

5. How well can you learn general mathematics?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

6. How well can you learn algebra?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

7. How well can you learn science?

1	2	3	4	5	6	7
---	---	---	---	---	---	---

1                      2                      3                      4                      5                      6                      7  
Not well at all                      Not too well                      Pretty well                      Very well

8. How well can you learn biology?

1      2      3      4      5      6      7

9. How well can you learn reading and writing skills?

1      2      3      4      5      6      7

10. How well can you learn to use computers?

1      2      3      4      5      6      7

11. How well can you learn a foreign language?

1      2      3      4      5      6      7

12. How well can you learn social studies?

1      2      3      4      5      6      7

13. How well can you learn English grammar?

1      2      3      4      5      6      7

14. How well can you finish homework assignments by the time they're due?

1      2      3      4      5      6      7

15. How well can you study when there are other interesting things to do?

1      2      3      4      5      6      7

16. How well can you concentrate on school subjects?

1      2      3      4      5      6      7

1                    2                    3                    4                    5                    6                    7  
Not well at all                    Not too well                    Pretty well                    Very well

17. How well can you take notes in class?

1           2           3           4           5           6           7

18. How well can you use the library to get information for class assignments?

1           2           3           4           5           6           7

19. How well can you motivate yourself to do school work?

1           2           3           4           5           6           7

20. How well can you plan time to do your school work?

1           2           3           4           5           6           7

21. How well can you arrange a place to study without distractions?

1           2           3           4           5           6           7

22. How well can you keep your school work organized?

1           2           3           4           5           6           7

23. How well can you remember information presented in class and textbooks?

1           2           3           4           5           6           7

24. How well can you participate in class?

1           2           3           4           5           6           7

25. How well can you learn sports skills?

1           2           3           4           5           6           7

1                    2                    3                    4                    5                    6                    7  
Not well at all                    Not too well                    Pretty well                    Very well

26. How well can you learn dance skills?

1           2           3           4           5           6           7

27. How well can you learn music skills?

1           2           3           4           5           6           7

28. How well can you learn skills needed for team sports (for example, basketball, volleyball, swimming, football, soccer)?

1           2           3           4           5           6           7

29. How well can do the kinds of things that are needed to be a member of the school newspaper?

1           2           3           4           5           6           7

30. How well can you do the kinds of things that are needed to be a member of the school government?

1           2           3           4           5           6           7

31. How well can you do the kinds of things needed to take part in school plays?

1           2           3           4           5           6           7

32. How well can you do regular physical education activities?

1           2           3           4           5           6           7

33. How well can you resist peer pressure to do the things in school that can get you into trouble?

1           2           3           4           5           6           7

1                    2                    3                    4                    5                    6                    7  
Not well at all                    Not too well                    Pretty well                    Very well

34. How well can you stop yourself from skipping school when you feel bored or upset?

1       2       3       4       5       6       7

35. How well can you resist peer pressure to smoke cigarettes?

1       2       3       4       5       6       7

36. How well can you resist peer pressure to drink beer, wine, or liquor?

1       2       3       4       5       6       7

37. How well can you resist peer pressure to smoke marijuana?

1       2       3       4       5       6       7

38. How well can you resist peer pressure to use illegal pills?

1       2       3       4       5       6       7

39. How well can you resist peer pressure to use crack?

1       2       3       4       5       6       7

40. How well can you resist peer pressure to have sex now or in the next few years?

1       2       3       4       5       6       7

41. How well can you control your temper?

1       2       3       4       5       6       7

42. How well can you live up to what your parents expect of you?

1       2       3       4       5       6       7



1                    2                    3                    4                    5                    6                    7  
Not well at all                    Not too well                    Pretty well                    Very well

43. How well can you live up to what your teachers expect of you?

1       2       3       4       5       6       7

44. How well can you live up to what your friends expect of you?

1       2       3       4       5       6       7

45. How well can you live up to what you expect of yourself?

1       2       3       4       5       6       7

46. How well can you make and keep friends of the opposite sex?

1       2       3       4       5       6       7

47. How well can you make and keep friends of the same sex?

1       2       3       4       5       6       7

48. How well can you carry on a conversation with others?

1       2       3       4       5       6       7

49. How well can you work in a group?

1       2       3       4       5       6       7

50. How well can you express your opinions when other classmates disagree with you?

1       2       3       4       5       6       7

51. How well can you stand up for yourself when you feel you are being treated unfairly?

1       2       3       4       5       6       7

1                      2                      3                      4                      5                      6                      7  
Not well at all                      Not too well                      Pretty well                      Very well

52. How well can you deal with situations where others are annoying you or hurting your feelings?

1      2      3      4      5      6      7

53. How well can you stand up to someone who is asking you to do something unreasonable or inconvenient?

1      2      3      4      5      6      7

54. How well can you get your parent(s) to help you with your problems?

1      2      3      4      5      6      7

55. How well can you get your brother(s) or sister(s) to help you with a problem?

1      2      3      4      5      6      7

56. How well can you get your parents to take part in school activities?

1      2      3      4      5      6      7

57. How well can you get people outside the school to take an interest in your school (for example, parents, churches, other groups)?

1      2      3      4      5      6      7

**APPENDIX B**  
**BOARD OF REGENTS SURVEYS**

PLEASE MARK ANSWERS ON ANSWER SHEET

### 2010-2011 SURVEY OF LA GEAR UP PARENTS/GUARDIANS

As mandated by the U.S. Department of Education LA GEAR UP must administer surveys to parents and students as part of GEAR UP's Annual Performance Report. The purpose of this survey is to gather data and feedback regarding the LA GEAR UP program at your child's school.

Your child's name will not be published in any report. The information you provide will only be viewed by the researchers. Please answer the following questions with respect to your 8<sup>th</sup> and/or 9<sup>th</sup> grade child. These questions are about his/her experiences with school and your expectations for your child's future.

**PLEASE MARK YOUR ANSWERS ON THE ANSWER SHEET ATTACHED.**

1. Has anyone from your child's school or LA GEAR UP ever spoken with you about college entrance requirements or the courses that your child will need to take in high school in order to prepare for college?      A. Yes      B. No
  
2. Have you talked with your child about attending college?      A. Yes      B. No
  
3. Has anyone from your child's school or LA GEAR UP ever spoken with you about the availability of financial aid to help you pay for college?      A. Yes      B. No
  
4. What is the highest level of education that you think your child will achieve?  
(Select One Answer)
  - A. My child will drop out before finishing high school
  - B. My child will finish high school
  - C. Some college, but less than a 4-year college degree
  - D. 4-year college degree
  - E. Graduate degree, like a Master's (MA), doctorate (Ph.D.), law (JD), or medical (MD)
  
5. Do you think your child could afford to attend a 4-year public college using financial aid, scholarships, and your family's resources?
 

A. Definitely	D. Probably not
B. Probably	E. Definitely not
C. Not Sure	

## PLEASE MARK ANSWERS ON ANSWER SHEET

Use the following question to answer 6-8.

Are you familiar with the entrance requirements for each of the following types of schools?

Yes No

6. A. B. 2-year or community college
7. A. B. 4-year college or university
8. A. B. Vocational, trade or business school
9. How much do you think it costs for tuition and fees to go to a 4-year public college in Louisiana for one year?
- A. Under \$2000  
 B. \$2001 - \$4000  
 C. \$4001 - \$6000  
 D. \$6001 - \$8000  
 E. \$8001 - \$10,000  
 F. Above \$10,000
10. Throughout the year, how many activities or events do you attend at your child's school?
- A. None of the events  
 B. Few  
 C. Some  
 D. Most  
 E. All of the events

Use the following question to answer numbers 11-14.

Are you familiar with any of the following LA GEAR UP opportunities offered at your child's school?

	<u>YES</u>	<u>NO</u>	<u>I have never heard of this</u>
11. Summer Learning Camps	A	B	C
12. Explorers Club	A	B	C
13. Writing Contests	A	B	C
14. Rewards For Success College Scholarships	A	B	C

## PLEASE MARK ANSWERS ON ANSWER SHEET

15. How often do you talk with your child's teacher?
- |                                 |                        |
|---------------------------------|------------------------|
| A. Never                        | D. Once a semester     |
| B. Only when there are problems | E. Once a month        |
| C. Once a year                  | F. Once a week or more |
16. Has your child repeated any grades? If so, which ones? (Select all that may apply.)
- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| A. None                  | F. 4 <sup>th</sup> grade | K. 9 <sup>th</sup> grade |
| B. Kindergarten          | G. 5 <sup>th</sup> grade |                          |
| C. 1 <sup>st</sup> grade | H. 6 <sup>th</sup> grade |                          |
| D. 2 <sup>nd</sup> grade | I. 7 <sup>th</sup> grade |                          |
| E. 3 <sup>rd</sup> grade | J. 8 <sup>th</sup> grade |                          |
17. Is anyone in your household currently attending college?
- |             |
|-------------|
| A. Yes      |
| B. No       |
| C. Not sure |
18. What is your relationship to this child?
- |               |                   |                  |
|---------------|-------------------|------------------|
| A. Mother     | D. Stepfather     | G. Grandparent   |
| B. Father     | E. Aunt/ Uncle    | H. Foster parent |
| C. Stepmother | F. Other relative | I. Someone else  |
19. What is your highest level of education?
- |                                    |
|------------------------------------|
| A. Elementary                      |
| B. Junior high school              |
| C. Some high school                |
| D. High school diploma or GED      |
| E. Certificate program             |
| F. Some college                    |
| G. AA or Associates degree         |
| H. BA or Bachelor's degree         |
| I. Graduate or professional degree |
20. How do you describe yourself?
- |  |                       |
|--|-----------------------|
| A. American Indian or Alaska Native          | E. White              |
| B. Asian                                     | F. Hispanic or Latino |
| C. Black or African American                 | G. Other              |
| D. Native Hawaiian or Other Pacific Islander |                       |

## 2010-2011 SURVEY OF LA GEAR UP STUDENTS

**PLEASE USE A #2 PENCIL TO BUBBLE IN THE CIRCLES COMPLETELY**

**As mandated by the U.S. Department of Education LA GEAR UP must administer surveys to parents and students as part of GEAR UP's Annual Performance Report. The purpose of this survey is to gather data and feedback regarding the LA GEAR UP program at your school.**

**Your name will not be published in any report. The information you provide will only be viewed by the researchers.**

**You have an option of completing this survey using this hard copy (mark your answers on the answer sheet) or online at [www.legearup.org](http://www.legearup.org)**

First Name and Last Name \_\_\_\_\_

Name of School \_\_\_\_\_

Gender:     Male     Female

What is your grade level?

1.     Grade 8  
        Grade 9

2.    Has anyone from your school or LA GEAR UP ever spoken with you about college entrance requirements or the courses that you need to take in high school in order to prepare for college?

Yes                          No   

3.    Has anyone from your school or LA GEAR UP ever spoken with you about the availability of financial aid to help you pay for college?

Yes                          No   

4.    Do you think you will be able to afford to attend a public 4-year college using financial aid, scholarships, and your family's resources?

- Definitely                       Probably not  
 Probably                         Definitely not  
 Not Sure

5.    How far in school, do you think you will go? What is the highest level of education you expect to obtain?    (FILL IN ONLY ONE)

- I don't plan to finish high school  
 I plan to finish High School  
 Some college, but less than a 4-year college degree  
 4-year college or higher

6. Has being a part of LA GEAR UP changed your plans about going to college?
- (A) Yes
  - (B) No, I still don't want to go to college
  - (C) No, I was already planning to go to college
  - (D) I have never heard of LA GEAR UP
7. If LA GEAR UP has changed your plans for college, what was the biggest reason?
- (A) Information about financial aid and how much college costs
  - (B) Information about the benefits of going to college
  - (C) Going to Summer Learning Camp
  - (D) Being a member of the Explorers Club
  - (E) Tutoring or help with work
  - (F) Visits to college campuses
  - (G) I have never heard of LA GEAR UP
8. Do you have an idea of what courses you should take in high school to prepare for college?
- Yes (A)                      No (B)
9. During the past year, have you discussed going to college with any adults in your family or at your school?
- Yes (A)                      No (B)
10. How many after-school activities do you participate in at school?
- (A) My school does not have any after-school activities
  - (B) None
  - (C) One
  - (D) Two
  - (E) Three or more activities
14. How much do you think it costs in tuition and fees to go to a 4-year public college in Louisiana for **one year**?
- |                   |                     |
|-------------------|---------------------|
| (A) Under \$2000. | (D) \$6001 – 8000   |
| (B) \$2001 – 4000 | (E) \$8001 – 10,000 |
| (C) \$4001 – 6000 | (F) Above \$10,000  |
15. How many activities or events at your school does one of your parents or guardians attend?
- (A) All
  - (B) Most
  - (C) Some
  - (D) Few
  - (E) None



**APPENDIX C**  
**HUMAN USE COMMITTEE APPROVAL FORM**



**LOUISIANA TECH**  
UNIVERSITY

OFFICE OF UNIVERSITY RESEARCH

MEMORANDUM

TO: Ms. Candi Hill and Dr. Donna Thomas

FROM: Barbara Talbot, University Research

SUBJECT: Human Use Committee Review

DATE: September 10, 2013

RE: Approved Continuation of Study HUC 766

TITLE: **“The Impact of the LA GEAR UP Program and Mid-year Consolidation of Information during Summer Camps...”**

**HUC 766**

The above referenced study has been approved as of September 10, 2013 as a continuation of the original study that received approval on April 7, 2010. **This project will need to receive a continuation review by the IRB if the project, including collecting or analyzing data, continues beyond September 10, 2014.** Any discrepancies in procedure or changes that have been made including approved changes should be noted in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-5066.

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM

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