EFFECTS OF ADULT VOLUNTEERS' PRESENTATION ON HIGH SCHOOL STUDENTS' ENGAGEMENT AND INTENT TO STAY IN SCHOOL

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ABSTRACT

Education is a key component to building a successful life and completion of high school is a critical part of that education. The issue of students dropping out of school is one that is growing, despite many attempts by schools and the community to reverse the trend. There are many studies that have been done to determine the reasons for students not completing their high school education and the most consistent explanation appears to be that students are not engaged in their education during their high school years.

This experimental study was done to examine the effects of adult volunteers on ninth grade students' engagement in school, to see if the volunteers' presentations helped to raise the level of engagement for the students. It used a pre- and post-test quasi-experimental design. Volunteers were recruited from a local company, trained and provided with materials to present to the students. Findings from the research indicated, contrary to expectations, an overall decrease in engagement levels with both the experimental and control group students. However, anecdotal comments made by the students with volunteers, and interviews with volunteers and teachers, suggested an increased level of interest in completing or continuing education.

The number of students participating in the study was much lower than hoped for and this small sampling may have affected the results. Additional research on this topic could be helpful as the education system is going through some very challenging economic times and may need to turn to the community for assistance in the very near future.

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I would be remiss if I didn't also thank Dr. Wanda Bamburg, Superintendent of Schools and Dr. Priscilla Ridgway, both of Aldine ISD, for their assistance and support as I did the evaluation. Their concern for the well-being and achievement of their students is inspiring and is what is driving their district to successfully educate and prepare their students for the future.

And finally, my thanks and gratitude to my husband, who has pitched in with anything and everything around the house, read drafts, and listened as I worked my way through, and has been here throughout to help me in any way he can. I believe very passionately that positive adult role models are critical to students and I hope that this is the beginning of more research which will prove that to be true. If we can put qualitative information to what we believe instinctively, we will build a very strong argument to get more people involved in education and in promoting the success of our children.

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Chapter 1

Introduction

The issue of students failing to complete high school is not a new one; however, the implications and complications of dropping out have increased. While salaries in most fields have risen, salaries for dropouts have actually declined over the last fifteen years. According to the *U.S. Census Bureau* (2011), high school dropouts earned an average of \$21,023 annually; the annual salary for someone with a high school diploma was \$31,283. With the advent of the information age, technology and an increased cost of living, jobs requiring a bachelor's degree were projected to grow by 25% while jobs that need only a high school diploma were estimated to barely grow by 9% (Alliance for Excellent Education, 2003). This information is driving schools across the nation to find methods or strategies to increase retention of their high school students, thereby reducing their dropout rates.

The concern about students dropping out is a national issue. In a study done in 2001, Kaufman reported 20 percent of students who began high school did not complete their education. The number of younger students, those still in junior high school, who did not complete their high school education, was also increasing (Kaufman, Naomi Alt, & Chapman, 2001). Despite high school completion being an issue across the country, the U.S. Department of Education has not created an overarching program for dropouts as it is against their charter. According to Public Law 96-88, The U.S Department of Education was created to support the states, parents and private organizations in their efforts to create a strong, effective education system, not to gain additional power, dictate curricula or school policy (*National Institute of Health*, 2011). Each state has its own

Board of Education and beyond conforming to certain federal requirements, such as the No Child Left Behind Act, these boards are able to govern the districts in their respective states autonomously.

The Texas State Board of Education is addressing the issue of dropouts directly in its long-range plan (*Texas Education Agency*, 2003). Dropout rates are measured in a variety of ways including event, status, and cohort dropout rates. Event dropout rates are a way to measure "the proportion of students who leave school each year without completing a high school program" (Schargel, 2004, p. 30). Status dropout rates look at dropout rates among an age group of students, 16-24, who have not earned high school credentials. Cohort rates look at a particular group of students, either the same age or in the same grade, across a specific amount of time (Schargel, 2004). The statistics show that dropouts in Texas have decreased steadily since 1996 (Deviney & Cavazos, 2006) but in 2005, the number of students that dropped out of school was over 11,000 (Texas Education Agency, 2006). During the recent economic crisis, Texas has fared better than most states with an unemployment rate of only 8.3% versus other states where the unemployment rate is in double digits (Bureau of Labor Statistics, 2010) but a continuing decline in an educated workforce will have repercussions not only for the individual dropouts, but will affect the overall populace.

When 25% of the state's adult population does not have a high school diploma (*U.S. Census Bureau*, 2002), the effects are widespread. It not only makes a difference in their personal lives and their immediate families, but can affect the economy of their state and the country. According to the *U.S. Census Bureau* (2002), for individuals, their ability to earn is severely curtailed without a high school diploma and will cost them an

average of \$8,000 per year. That is merely the amount they would have earned had they received their high school diploma. If one factors in the possible earnings that would have been gained by going to college and attaining a bachelor's degree, that annual loss increases to nearly \$30,000 (*U.S. Census Bureau*, 2002). The costs for dropouts extend to the state and federal economies as well. "If the male graduation rate were increased by only 5 percent, the nation would see an annual savings of \$4.9 billion in crime-related costs" (*Alliance for Excellent Education*, 2006, p. 3). As additional students become dropouts and this part of the population grows, the effects will be felt by the state of Texas as average income drops, tax breaks are rescinded, and businesses move to other states to find the skilled, educated workforce they need. Indeed, concerns have already risen regarding the availability in the United States of qualified job candidates, especially in professional fields such as engineering and accounting (Gordon, 2009).

Recognizing the impact of this crisis on the country, multiple organizations have become creative in attempting to counter the trend, with regional or community plans implemented for dropout prevention. In a study of Urban CEO Superintendents, ten school districts were analyzed for dropout statistics and prevention programs. In this study, the legal system was involved in eight out of ten districts' strategies for dropout prevention, either through grants from the justice system to address dropouts or as punishment when students missed compulsory attendance (Hoyle & Collier, 2006). The districts involved in this study also mentioned adding personnel to address the issue and a specific program for dropout prevention was mentioned by all the districts (Hoyle & Collier, 2006). The Houston Independent School District (HISD) has a section on their web site dedicated to high school students who have dropped out and are considering

(http://www.houstonisd.org/HISDConnectDS/v/index.jsp?vgnextoid=dd9cd21d36fdb210

VgnVCM10000028147fa6RCRD&vgnextchannel=b414f0a53cf2b210VgnVCM1000002

8147fa6RCRD). The Texas Education Agency reported that the dropout rate for Hispanic students was nearly three times as high as the rate for White students (*Texas Education Agency*, 2009). Current demographics for HISD show that 61% of the students enrolled in the district are Hispanic (*Texas Education Agency*, 2009). If 61% of the students attending the district have three times the probability of not completing high school, this becomes a tremendous concern for the district. While Houston Independent School District has the largest student population in the Houston area, there over 1,000,000 students throughout the area in additional districts and if these students are as likely to drop out of schools as statistics indicate, the impact on their lives, the state economy and the economy of the country will be mostly negative with higher unemployment, lower tax collection, and higher crime rates in a continuously downward spiral.

As these studies suggest, keeping students in school is an important goal, both for their personal sake as well as for the sake of the state and national economy. Making a difference in how they view education, building a desire to complete post-secondary school and showing students the relevance of education to their daily lives is an important part in this effort. While school districts, school administration, and teachers are actively working on this issueand improving the dropout rate it is still significant and detrimental. The emphasis on high-stakes testing in public schools is not only pushing the teachers' focus toward the tests and the concepts on the tests, it could be influencing students

negatively. As students start to do poorly on tests, their self images falter and their desire to stay in school, when they feel no sense of success, fades (Christenson & Thurlow, 2004).

There is no single answer or cure for keeping students in school but the research suggests that giving students a reason to stay can help (Finn & Rock, 1997). The reason could be that they are engaged by the curriculum, they see the applicability of their education to their future, they have support from family or friends in completing their education, or they become convinced of the personal cost and consequences of dropping out. This thesis is going to explore the impact that a community volunteer can have on the engagement of the students in the classroom and whether that engagement and involvement has a positive impact on the students decision to stay in school and/or to continue their education after high school.

Chapter 2

Review of Literature

This chapter examines the literature regarding dropping out of school, risk factors, interventions, engagement, adult intervention, and social capital. Each topic will be reviewed and how it relates to high school students and the relevance to this thesis will be explored. The research questions follow.

Dropping Out

School dropouts, that is students leaving school before completing their senior year, is an issue for the education system and has become one of the foremost areas of concern for public school systems. These students, who leave school early, are considered failures of the system and more importantly, leave the school system without the basic literacy skills intended to be conveyed by the public education system (Finn, 1989). Students are generally classified as dropouts after leaving middle or high school without receiving a high school diploma.

Ample literature has attempted to determine the root cause of high school students dropping out and then address it (Lever et al., 2004; McCaul, Donaldson, Jr., Coladarci & Davis, 1992; Montecel, Cortez, and Cortez, 2004). In a study conducted in Canada, researchers used community consultations and interviews to find out why students did not complete high school. The overwhelming response was that the students were not engaged (Tilleczek, Ferguson, Rummens, & Boydell, 2006). Finn and Rock (1997) conducted a study in which they focused on student engagement because, "unlike socioeconomic status (SES) or race, engagement may be manipulable" (p. 221). In a

paper analyzing dropout prevention for students with disabilities, Williams Bost and Riccomini (2006) concluded, "Dropping out is a multifaceted process with direct links to disengagement from school and not a single impulsive action" (2006, p. 303).

LeCompte and Dworkin researched student dropouts in conjunction with teacher burnout, believing that the factors that lead to one are also the factors that create the other. Where certain circumstances occur in the education arena, teachers and students will be pushed beyond their limits and will dropout or burnout (1991). Among the many issues discussed is the fact that people enter into the education experience, whether as an educator or pupil, hoping to attain a goal that has been explained by culture and shown to be desirable for all. As they progress through their educational experience and that goal seems to become less and less attainable, the desire to participate and strive for accomplishment diminishes as well. In circumstances where so much is at stake for the individual, to have their goal attainment become a political target as schools and districts try to measure and evaluate dropouts, only increases the problems faced by the participants (LeCompte & Dworkin, 1991).

Risk Factors

Studies have shown that students have a higher risk of dropping out due to socioeconomic status than race or gender (Almedia, Johnson, & Steinberg, 2006). As Munns stated, "Low socio-economic status (SES) students still bear the greatest brunt of the educational losses from schools and classrooms that at one level offer hope and achievement for all, but deliver loss, devaluation and exclusion for many" (2007, p. 301). Unfortunately, many individuals who do not complete high school and have a family are more likely to have children that will continue the preceding trend. Their lack of

education and lack of belief in the value of education will likely lead them to lower academic attainment and economic disadvantage.

One possible factor for non-completion that is of great concern currently is high-stakes testing. As school systems across the country work to be more accountable for what the students are learning, the continued push for testing may be pushing some students to leave school (Christenson & Thurlow, 2004). As students start and continue to do poorly on these tests, they can feel that school is not a good fit for them and begin to contemplate withdrawal.

Dropping out should realistically be viewed not as an event, but as a process. Students do not decide overnight that they no longer wish to attend school. Rather, as students become less and less engaged in their own education, they begin to lean toward not completing school as opposed to seeing the benefits of completion. As Finn and Rock noted, while engagement can be affected more readily than SES (1997), the combination of low engagement with low SES can be exceptionally difficult to overcome.

Interventions

In the case of affecting student secondary school completion, intervention is a change in the day-to-day activities of the students and could be anything from school itself to something outside of the normal planned curriculum to something new or different within the curriculum. Interventions are simply a way of trying to affect an outcome in a positive manner through a new or different mechanism. When interventions can be data or research based, it allows for a stronger sense of security in attempting that intervention as well as an outline or process to follow for the intervention.

The discussion of interventions reiterates the need for student engagement as well as programs that are tailored to student needs and include the school, family, and community. "Interventions that yielded moderate to large effects on at least one dependant variable provided early reading programs, tutoring, counseling, and mentoring; they emphasized creating caring environments and relationships, used block scheduling, and offered community service opportunities" (Christenson & Thurlow, 2004, p. 33).

As Finn (1989) suggested, whatever intervention a school or school district is trying, they need to be oriented toward increasing student participation. Engaging students in their education is critical and according to Finn, "it is essential that schooling come to be seen as important to survival and a way to achieve some degree of belonging and power." (1989, p. 137)

Engagement

Engagement in school reflects the relationships students have with each other, their teachers, and the learning experience. At-risk students have less well-developed relationships and the lack of engagement can lead to alienation and dropping out (Nowicki, Duke, Sisney, Strickler & Tyler, 2004). Suh and Suh (2006) studied education engagement and degree attainment and concluded that the three most prominent factors for adolescents were academic aspiration, organizational skill, and locus of control. Students who believe that they can and will complete school have a better chance of graduating than those who do not believe it is possible for them. Students' organizational skills come into play through their time management and study habits. Where students master these organizational skills, they have a higher likelihood of graduation attainment. Helping the students to see that finishing school is something they can affect and control

will also help them to be more successful. As they feel more control over their school environment, they are more likely to become more engaged in their education.

Active learning has been described as an effective tool to affect dropouts. Active learning covers a multitude of learning styles but all styles include an opportunity for the students to actively participate in their education whether through working in teams, speaking, performing new skills or demonstration (Foster & Shirley, 2004).

Furlong and Christenson (2008) discussed four aspects of student engagement, which include academic engagement, behavioral engagement, cognitive engagement, and affective engagement. Academic engagement was defined as the amount of time spent doing schoolwork and the amount of homework completed. Behavioral engagement was described as attendance, participation, questions, and involvement with extracurricular activities. How relevant students perceive education to be to their future success is cognitive engagement and affective engagement is seen as the connection and support of parents, teachers, and peers. Suh and Suh (2006) recommended that the community and school system should promote the link between education and the student's plans for the future. The link between the applicability of education and life after school is a critical one. This link can often be established by adult role models, even those who are not parents or teachers. In a study on community volunteer programs, Allen, Kupermine, Philliber and Herre (1994) found that these programs have helped to decrease discipline issues and increase academic performance. Adult mentors have positive effects on students in higher education and may possibly help with high school students' retention (Smith, 2007).

Engagement is seen to be the most important single factor in school completion by many and one of the keys to help schools increase retention (Appleton, 2006). It has also been described as a process, not a single event (Appleton, 2006; Williams Bost & Riccomini, 2006). This ties in well to research that has also shown that withdrawing from school is a process. While studies range in the age of the subjects participating from elementary to high school, many still believe that high school is the area where the most impact can be felt if the students are reached early enough. This may be because students and parents will generally feel more pressure to keep students in school when they are younger and there may be less pressure to quit school and get a job when the students are elementary school age. When students are in high school, some families may see alternatives, such as dropping out and going to work, as better choices although the short term gain is far outweighed by gains if the students finish school.

Engagement has been described with several typologies from time and energy spent on class work and after school programs (Kuh, 2009) to Appleton's metaconstruct including academic, behavioral, cognitive and psychological subtypes (Appleton, 2006). The typologies including academic, behavioral, cognitive and psychological engagement lend themselves more readily to research as they are more effectively quantified than time and energy and enable the quantification of more specific variables that can be addressed by educators in the future.

Adult Intervention

The education system in the United States appears to be going through a crisis.

Average test scores for American students on many standardized international tests are generally much lower than anticipated, putting the nation in the middle to lower end of

achievement. Studies are done on a regular basis to compare how the United States educates children versus how it is done in other countries. No Child Left Behind was implemented by President George W. Bush to push local school districts toward stronger education for their students, with an emphasis on high-stakes testing. As a state, Texas ranks 43rd in educational attainment (*U.S. Census Bureau*, 2011) and this apparent lack of achievement is a concern to educators and the public. There are many strategies being implemented to help students achieve and one of these strategies is adult mentoring.

Mentors have become an integral part of the education system, with many school-based mentoring programs focusing on academic achievement. In the city of Houston, most school districts have an established mentoring program to help the students increase their grades and to help students with behavioral issues become better prepared for life after school. For example, Humble ISD, Katy ISD and Spring Branch ISD, all have programs that are designed to bring adult mentors into the classroom to help students with math, science, reading and other critical curriculum needs

(http://www.humbleisd.net/2232103315137727/blank/browse.asp?a=383&BMDRN=200 0&BCOB=0&c=82102&2232Nav=|&NodeID=2084,

http://www.katyisd.org/PIE/Pages/KEYSMentoring.aspx,

http://www.springbranchisd.com/partners/part_dev/volunteers/opportunities.htm). If students are able to earn better grades and learn more, they are more likely to be successful. A mentor is defined as a leader or coach and typically signifies a one-to-one relationship. While the literature around mentoring continues to grow, Lasley concluded that "mentoring is considered to be among the most effective methods for helping young people to increase their self-esteem and to reach their potential" (Buell, 2004, p. 57). As

self-esteem is enhanced, students' affective, behavioral and psychological engagement will increase, increasing their overall engagement with school. As students become more engaged, they realize the benefits of completing their education. This may be explained with the weak tie theory Granovetter (1973) proposed whereby people are able to increase their outreach through those they know, not very well, because these contacts will be connected to people outside of the individual's regular social circle. These weak ties can bring resources to bear that differ from those the individual normally has available. For students, the mentor can bring information and knowledge outside of the student's normal circle as well as connections to business and the community that may not have been available previously.

In Houston, the Houston Independent School District has adopted an "Expectation Graduation" philosophy for the district. Their goal is to build a district where students, as early as kindergarten, begin planning for college. Administrators and faculty emphasize college from kindergarten throughout their academic career and act on the belief that all the students will attend college. Among the programs they have created to combat dropouts is "Reach Out to Dropouts." More than 500 volunteers from across the city go door-to-door to talk to students who have not been attending school and encourage them to return. These volunteers try to relate to the students and connect the relationship of education to success. The district has also hired ten dropout prevention specialists to find ways to keep the students in school. These specialists believe that the reasons students drop out are all different and they approach each student as an individual. They work with the students and their families to try to recover as many students as they can (http://www.houstonisd.org/portal/site/StudentSupportServices/menuitem.a2de90fd3a201

<u>&vgnextchannel=8db3df788185f010VgnVCM10000028147fa6RCRD</u>). With a school population of over 200,000 students, 10 dedicated professional staff can make a difference. However, they cannot reach all the students that need to be reached. The Superintendent, Dr. Terry Grier, has made decreasing the dropout rate one of his highest priorities (Houston Independent School District, 2009) although specific plans and programs are implemented and shared with the public at a measured pace.

Bandura's (2001) Social Cognitive Theory recognizes the significance of modeling and the impact it can have on behavior. The decision to bring adult role models into the classroom setting to demonstrate to students appropriate behaviors that can lead to success is supported by Bandura. He states, "Seeing others gain desired outcomes by their actions can create outcome expectancies that function as positive incentives" (p. 276). An adult who comes from a background similar to the students', who can share information on what decisions he or she has made to help reach their current level of success, can influence the students' own decisions. Finn and Rock (1997) found that low self-esteem and external locus of control were a major part of academic failure. Students with low self-esteem will often view academic failure as something to be expected. If students attribute an external locus of control to their performance in school, they are less likely to be able to positively impact their own performance, not seeing it as something over which they have power. A study was done in a high school of the Effective Learning Program (Nowicki et al., 2004) to determine if the program had a positive effect on the dropout rate of the students. Students were educated about interpersonal styles based on Carson's (1969) interactional theory. This theory suggests that certain behavior

on the part of one participant draws specific behavior from the other party. Using this information, students were able to self-direct their behavior and begin to change their responses. The graduation rate for these students was 98% versus the control group of students whose completion rate was 38% (Nowicki et al., 2004). Developing a sense of control around their performance helped these students positively affect education attainment.

Mentoring has been studied more in regard to teachers, nursing, and business mentors. Galbraith (2003) noted that mentoring can help assist in self-directedness. If mentoring with adults can increase self-directedness, then perhaps mentoring with high school students can help to increase their belief in an internal locus of control. Properly trained adult mentors can communicate with the students and empower them to change their behavior, while also increasing their understanding of their ability to shape their own lives for a more positive outcome. As a weak tie for the students, mentors also have the opportunity to share new information on potentials and opportunities for all students.

Bandura (2001) reports, "Most human behavior is directed by forethought toward events and outcomes projected into the future" (p. 268). If most behavior is directed toward the future, then making a connection for students between the decisions they are making today and how those will affect their future should have a positive impact on their behavior.

Social Capital

Social Capital is considered to be the relationships among people that enable individuals to proactively change or improve their situation (Coleman, 1990).

Relationships create networks and these networks have been studied to see how they

connect both with those who are part of the network and others who are outside of the network.

Adult volunteers should be able to make a difference in the lives of students by helping them to be more engaged in their own education and to feel that they are a part of a network. People generally think of parents as the natural source of adult supervision, but as Yancy, DiTomaso and Post (2009) describe, working class parents often lack the knowledge of the system and social connections with the school to be able to provide that kind of social capital for their children. In those circumstances, although the parents are supportive of a college education, they do not necessarily know the best way to get one. That being the case, those parents who were in a more middle-class situation were better able to provide the "strong-tie relationships" that would help their children (p. 551). The conclusion they suggested was that families with both strong and weak ties were better able to provide resources for their children, but still limited in some of their social connections (Yancy, DiTomaso, & Post, 2009).

It may be that adult volunteers, who are not parents, and not teachers, would have the weak ties that would help bridge the gap for success for students. In his theory, Granovetter suggests that people build social networks among those closest to them such as family and friends and these ties are very strong. In addition, they can build ties among acquaintances and these ties are weak (Granovetter, 1983). The suggestion is that these kinds of ties can create connections with other parts of the community where family may not have any influence leading to job or education opportunities (Sabol, Coulton, & Korbin, 2004). Communication between members of networks with strong ties is very consistent, meaning that what one hears tends to be the same information from all

sources, a repetition of what others have said. With someone who is a weak tie however, that communication changes to match the information available to that weak tie which may be very different from that of strong ties. In addition, the message itself could be very different and therefore encourage new ideas and opportunities for the listener. "Strong ties provide the social cohesion and weak ties provide the new resources," (Ashman, Brown, & Zwick, 1998, p. 168). This might suggest that the teacher, as a day-to-day part of the students' lives, along with their parents, bring the strong ties to the students and the community volunteer can provide the weak ties. As Sabol (2004) stated, weak ties can bring different parts of the community together when otherwise they would remain disconnected (Sabol, Coulton, & Korbin, 2004).

In a study on ethnic enclaves, Pfeffer and Parra (2009) found that human capital included traits such as education, language, and immigration status and the higher those were, the more resources those individuals could bring to the table. Frequently, volunteers are individuals who have become successful to some degree and feel the desire to give back to the community. When volunteering in a school where the students come from a low to moderate socio-economic background, they may have more social capital to share with the students, making their weak ties become very valuable for the students.

Behaviorally, having a volunteer come to present adds variety to the students' day, most likely increasing their engagement. In addition, volunteers have no preconceptions about the students with whom they are working and, therefore, set expectations of participation that may be higher than those set by the teacher. A volunteer coming into a classroom, especially on consecutive occasions, may build a

rapport with the students who recognize the effort the volunteer is putting forth for them, building emotional engagement. As the volunteer shares what education has meant to them and their current success, the students may be engaged cognitively as well, seeing the impact that education can have for them and helping to realize they have the power to affect their level of education.

One explanation for this impact could be critical contact theory. Recruitment literature has suggested that when companies attempt to recruit individuals, it is not so much the job, benefits or corporate reputation that has an effect on the potential employee, but more the person who is the recruiter (Harn & Thornton, 1985). Other studies observed that the actual recruiter was the major influence in whether or not an applicant wanted the job. The recruiter was felt to represent the entire company and their demeanor, pleasantness and appeal gave applicants a feeling for all the employees at that company (Glueck, 1973). It is possible then that the volunteer's appearance, likeability, and charisma can positively affect the students in the classroom.

The involvement of the community in classrooms is considered to be an effective way to make a difference in the lives of students. As the community becomes more willing to be involved in the education arena, are there ways to bring adult volunteers into the classroom to work with the students and help them to become more fully engaged academically? Recognizing that students' academic aspirations can be affected by information received from a community member, if those community members promote student engagement, can we show that increased engagement will have a positive effect on graduation attainment? The following research questions (RQs) will serve as the primary research focus:

- RQ 1: To what extent will the levels of engagement (e.g., academic, behavioral, cognitive, and affective) vary by the exposure to a presentation of a curriculum demonstrating applicability of education by an adult volunteer?
- RQ 2: To what extent will a student's intent to stay in school vary by the exposure to a presentation of a curriculum demonstrating applicability of education by an adult volunteer?
- RQ3: To what extent does the relationship between the exposure to the presentation and a student's intent to stay in school vary by the student's ethnicity?
- RQ 4: To what extent will the change in engagement levels relate to a student's intent to stay in school?
- RQ 5: To what extent does the relationship between the change in engagement and intent to stay in school vary by students' ethnicity?

Chapter 3

Methodology

In this chapter, the methods utilized in this research will be presented. First the research design will be described followed by information on subjects, variables, procedures, and data analysis.

Research Design

This study used a quasi-experimental research design in which high school students were exposed to two conditions - one experimental and the other control. That is, some students listened to a presentation by an adult volunteer (i.e., experimental condition) and others did not (control condition). The adult volunteer taught the Junior Achievement curriculum to the students. Junior Achievement is a non-profit organization dedicated to teaching young people in kindergarten through the 12th grade about business, economics, financial literacy, and the importance of staying in school. This is done through the recruitment and training of volunteers from various businesses and organizations within the community. These volunteers then present interactive lessons designed to show students their place within the economy and the applicability of the curriculum learned in school. If the volunteers can share a feeling of relatedness with the students, as well as creating weak ties with them, it may help the students to feel more engaged in school and to see the importance of, and opportunity with, continuing their education.

Subjects

Subjects were 9th grade students from the Aldine Independent School District. The students were enrolled in Career Connections and Money Matters classes. There were five classes at two campuses with total students in each class ranging from 24 to 31 students. The programs were provided to the students at Aldine Ninth Grade Campus during the fall semester of 2010 from September 15th through December 15th. During that same time period, 9th grade students at MacArthur Ninth Grade Campus completed pre-and post-surveys although they did not have the intervention of the volunteers. Participation in the study was regulated by the receipt of a parental permission slip, student permission slip, and completed pre- and post-tests. Possibly because this was not a graded activity for the students, the completion of all the paperwork was a stumbling block to having all students participate. In total, 210 students were enrolled in the classes chosen to participate. Of those 210, data was only used from 79 students who had completed all of the paperwork. Both schools are rated Exemplary by the TEA, as of 2009/2010 (*Texas Education Agency*, 2009).

Participation in the experiment was encouraged by the classroom teachers, but looking at the results, with almost a third more responses from the control group, a difference in the way the surveys were disseminated is apparent. The teacher of the classes in the control group collected a greater number of surveys from her students despite the class sizes being nearly equal as shown in Table 3.1.

Table 3.1 Frequency distribution of Program vs. Control

	Frequency	Percent	Valid Percent	Cumulative Percent
Program	60	38.0	38.0	38.0
Control	98	62.0	62.0	100.0
Total	158	100.0	100.0	

Note. The number of participants includes both pre- and post-test.

The participating students were enrolled in an elective course as opposed to a core curriculum course, which may have had some bearing on the gender distribution as the class may have been more appealing to males. According to the TEA Student Enrollment Report, MacArthur Ninth Grade is 49% female and 51% male, while Aldine Ninth Grade is 51.4% female and 48.6% male (*Texas Education Agency*, 2009). The large difference between the school's percentage of enrollment by gender, and the distribution of the students completing the pre- and post-survey is notable (69.6% male, 30.4% female). However, when the gender of the students enrolled in the classes is considered, the distribution is relational as overall, more males than females are enrolled in the Career and Technology courses at the school.

Table 3.2 Frequency distribution of Gender

	Frequency	Percent	Valid Percent
Male	110	69.6	69.6
Female	48	30.4	30.4
Total	158	100.0	100.0

Note: The number of participants includes both pre- and post-test.

The makeup in ethnic distribution for both schools is fairly similar, with MacArthur Ninth Grade having 86% of the students who are Hispanic American and 9.6% who are African American, and Aldine Ninth Grade's population is 80.9% Hispanic and 15.3% African American (*Texas Education Agency*, 2009). Both schools are

considered Title 1 schools due to a high percentage of economically disadvantaged students, with MacArthur having 83.8% and Aldine Ninth 89.2%. The students in the study showed a higher percentage of Hispanic American students participating (89.9%) and an equal mix of European and African American participating (5.1%) as shown in Table 3.3. While the difference is minimal, it may also be explained by the course in which the study was done. The Hispanic culture is generally viewed as being very entrepreneurial, so a class that would help the students in being successful in business could possibly be seen as being more helpful or appealing to Hispanic American students than to non-Hispanic students.

Table 3.3 Frequency distribution of Ethnicity

	Frequency	Percent	Valid Percent
European American	8	5.1	5.1
Hispanic American	142	89.9	89.9
African American	8	5.1	5.1
Total	158	100.0	100.0

Note. The number of participants includes both pre- and post-test.

Procedure

Trained volunteers recruited by Junior Achievement were assigned to each program class for a total of five volunteers. Once a week during the same class period they presented a 45 minute lesson to the students teaching interpersonal skills, interviewing, career goals, financial literacy and other course related topics. The volunteers visited the classrooms over a period of seven weeks presenting a total of five or seven lessons, depending on the programs the volunteers taught. The Junior Achievement Financial Literacy and Junior Achievement Success Skills programs were both used. The survey was given to students, by their teachers, in classrooms in Aldine Independent School District where the program classes had a Junior Achievement

volunteer and the control classes did not. The survey collected data on whether or not there was a change in the perception of student engagement by the teachers and students after the JA volunteers completed their program. Did the students understand how education can be vital to their success in the future? Did they feel that education is more relevant to them personally than they felt before? Were the students more engaged with learning in the classroom after the volunteer presentation?

While the researcher hoped to use an online survey, due to technical challenges in the schools the survey had to be delivered in hardcopy. Copies of the permission slips and surveys were given to the teachers, who then distributed them to the students, asked the students to complete the forms, and then collected the completed forms. The completed forms were then organized and the data analyzed. Data were gathered from both the program and control groups and then analyzed using t-tests, correlations, MANOVAs and/or ANOVAs as appropriate. Statistical analyses were conducted in close consultation with the committee chair.

Instrumentation

Students completed a survey both before and after the JA presentation that included measures of engagement, demographics, and JA program effectiveness. In addition, students who were not receiving a volunteer presentation of Junior Achievement completed the same survey except the part on JA program effectiveness. These surveys provided the program and control groups for the data. Much of the research available on student engagement involves college level students. Because the focus of this study is high school students, the data collected will help to increase information regarding high school students and their engagement levels in school.

The data show a decrease in cognitive and psychological engagement by all the students, regardless of whether or not they had an adult volunteer in the classroom. The Likert scale used 1 for strongly disagree, 2 for disagree, 3 for agree, and 4 for strongly agree. Overall, academic, behavioral, cognitive, and extrinsic motivation had a mean ranging from just above 2 to nearly 3, showing a consistent engagement level below what would be preferred. Peer and family support for learning had a mean score at or near 3 showing more engagement.

Behavioral engagement is considered to be demonstrated by attendance, participation (including questions asked) and extracurricular activities. It was measured by one item on the survey, question 30 (see Appendix B). A comparison of attendance and discipline statistics on campus were to be used. They were not used because such information was considered private and the researcher was denied access to it.

Academic engagement is frequently cataloged through the amount of time spent on schoolwork and the amount of work done in class and as homework. The school was asked about collecting grades for the students before and after the intervention, but student privacy was deemed to preclude sharing that information. However, two questions on the survey measured academic engagement; questions 29 and 31 (see Appendix B).

As Furlong and Christenson (2008) noted, cognitive and affective, or psychological engagement are harder to measure and using self-reports seems to work best for those areas. Therefore, the bulk of the questions on the survey were designed to measure cognitive and psychological engagement. Cognitive engagement encompasses the intellectual belief that students have that education is important for them and for their

future. Specifically, cognitive engagement was measured in the area of school work and extrinsic motivation. School work was viewed as the perceived relevance of the school work done by the students and recognition of its importance to them. Data on this variable were collected with questions 8, 9, 10, 11, 12, 13, and 14 (see Appendix B). Cognitive engagement regarding extrinsic motivation was operationalized with questions regarding the importance of external awards to the students and was measured with questions 28 and 33 (see Appendix B).

Psychological engagement was measured in the areas of teacher/student relationships, peer support for learning, and family support for learning. Psychological engagement describes the perceived support from teachers, family and peers.

Psychological engagement focusing on teacher/student relationship included questions 1, 2, 3, 4, 5, 6, and 7 (see Appendix B). These questions probed the students' perception of how the teachers felt about them and their success and included school administration by asking about adults versus teachers or the Principal. Psychological engagement regarding peer support for learning was covered by questions 15, 16, 17, 18, 19 and 20 (see Appendix B). Students were asked how they felt their peers viewed them at the school with regard to liking, respecting, and support. Psychological engagement in the area of family support for learning was measured by questions 25, 26, 27, and 32 (see Appendix B). Family support for learning includes help with schoolwork as well as encouragement and motivation.

The intent to stay in school was originally included in the cognitive engagement measures, but because of its primacy to the research, it was pulled out and analyzed on its

own. Questions 21, 22, 23, and 24 (see Appendix B) were used to measure the students' intent to stay in school.

The student survey is an adaptation of the Student Engagement Instrument (Appleton, & Christenson, 2004) with three questions added to the original survey. A sample of the surveys is included in Appendix B and Appendix C. In addition to these quantitative questions, there were opportunities for the program students to share their thoughts on staying in school and the importance of education for career success. While very few of the students took the time to answer these questions, there were responses from several of the students. While many of the students said that there plans had not changed or left that question blank, those that said the volunteer had affected their opinions listed the explanations in Table 3.4. The comments were positive overall in plans for the future and what the students had learned, however, the number of participants, or lack of participation, implies that for many the experience may have been a neutral one.

Table 3.4 Student comments on changes for future plans

- I will no longer go for a job that pays well but one I'm comfortable with. But I've always wanted to go to college and such.
- I'm going to try more to succeed
- I plan to go to college and get a good job and communicating well with others will help
- because before the program I wanted to work as a cashier at Wal-Mart and now I want to be a cosmetologist
- they made me decide the right things to do when I reach my goals
- I want to have a good job
- I know how to save up my money now

Reliability tests were completed for all engagement scales using Cronbach's Alpha. Intent to stay in school was found reliable with .94, academic engagement .61,

school work (CE) engagement was found to be reliable with .75, extrinsic motivation (CE) engagement was .70, teacher/student relationships measured .82, peer support was .85 and family support was .87. Mean, standard deviation, and reliability are shown in Table 3.5.

Table 3.5 Overall means, Standard Deviations, Number of Subjects, and Cronbach's Alpha for Major Variables

		Standard		Cronbach's Alpha
	Mean	Deviation	N	
Intent to Stay	3.46	.50	96	.94
Academic Engagement	2.79	.57	95	.61
School Work (CE)	2.96	.43	95	.75
Extrinsic Motivation (CE)	2.17	.80	95	.70
Teacher Student Relationship (PE)	2.80	.46	97	.82
Peer Support for Learning (PE)	3.12	.53	95	.85
Family Support for Learning (PE)	3.29	.60	95	.87

Notes. Mean and standard deviation scores are scale ones

CE=Cognitive engagement type

PE=Psychological engagement type

Chapter 4

Results

This research investigated the different levels of engagement of ninth grade students in relation to their exposure to, or lack of exposure to, the message and weak ties of a volunteer. This chapter reports the results of data analysis. Data were analyzed with the Statistical Package for the Social Sciences (SPSS) 19.0.

Research Questions

RQ 1 addressed the extent to which the levels of engagement (e.g., academic, behavioral, cognitive, and affective varieties) vary by the exposure to a presentation of a curriculum demonstrating applicability of education by an adult volunteer.

RQ 1 was answered by the multivariate two-group test (Hotelling's T^2). Stevens (2009) suggested that the multivariate analysis is useful to control the Type 1 error (i.e., falsely finding a significant outcome) with multiple t-tests. Results of the analysis of a MANOVA procedure indicated that there was an overall significant difference between experiment and control group when considering all types of engagement together Multivariate F(7,66) = 3.73, P < .002, partial eta squared = .28, Wilks Lamda = .72. Please note that only the post-test scores were subjected to the analysis. Box's test of equality of covariance matrices was not significant Box's M = 30.85, F(28, 10456.49) = .97, ns = not significant. Thus, equality of covariance is concluded, obviating the need to transform data to achieve the normality. Results of the post-hoc univariate F-tests indicated there were significant differences between the two groups (experiment vs. control) for seven types of engagement: academic engagement, behavioral engagement, school work, extrinsic motivation, teacher-student relationship, peer support for learning,

and family support for learning. An inspection of mean scores indicated that subjects in control group reported significantly higher engagement levels for all seven engagement types than subjects in the experimental group.

An additional post-hoc analysis was conducted to explore whether there was an interaction effect between test (pre-test vs. post-test) and experimental condition (experiment vs. control). This was to learn the extent to which the effects of experimental condition affected types of engagement and if those would vary by the test condition. Results of a MANOVA procedure with test and experimental condition as independent factors indicated no interaction effects of test and experimental condition on types of engagements as a whole, multivariate F (7, 138) = .45, *Wilks Lamda* = .98, *partial eta squared* = .02. Results of a univariate F test also suggested no interaction effects for any specific engagement type.

Table 4.1 Mean Scores, Standard Deviations, and Number of Subjects Across Experiment and Control Groups for Engagement Types on Post-Test

	Program/Control	Mean	Std. Deviation	N
Academic Engagement*	Program	2.43	.63	27
F=5.92, p <. 02	Control	2.79	.61	47
Behavioral engagement	Program	2.56	.89	27
F = 1.72, ns	Control	2.81	.74	47
School Work CE*	Program	2.56	.36	27
F= 11.45, p< .001	Control	2.91	.46	47
Extrinsic Motivation CE	Program	2.13	.63	27
F = 1.64, ns	Control	2.35	.77	47
Teacher Student Relationship PE*	Program	2.37	.41	27
F = 13.15, p < .001	Control	2.76	.47	47
Peer Support for Learning PE*	Program	2.70	.43	27
F = 10.67, p < .002	Control	3.10	.53	47
Family Support for Learning PE	Program	3.19	.70	27
F = .01, ns	Control	3.21	.59	47

Note. * The total number of subjects was 79. Degrees of freedom were 1, 73.

Research Question 2 asked: To what extent will a student's intent to stay in school vary by the exposure to a presentation of a curriculum demonstrating applicability of education by an adult volunteer?

This question was answered by a two-group test (experiment vs. control on intent to stay). Please note that only the post-test scores were subjected to analysis. Results of the analysis indicated that there was a significant difference between experiment and control group for the intent to stay in school (t = -2.65, df = 75, p < .01). An examination of mean scores indicated that students exposed to a defined program were less intent to stay in school than their counterparts in the control group; however, all students were likely to stay in school based on their mean scores. In addition, the control group scored higher on all types of engagement and continued the trend in the post-test.

Table 4.2 Intent to stay in school

	Program/Control	N	Mean	Std. Deviation
Intent to stay	Program	29	3.03	.68
	Control	48	3.40	.52

RQ3: To what extent does the relationship between the exposure to the presentation and a student's intent to stay in school vary by the student's ethnicity?

Among the subjects, four were European Americans, another four were African Americans, and the remaining 71 were Latin/Hispanic Americans. This ethnic distribution of the subjects is extremely skewed or imbalanced. Therefore, European and African Americans were combined and recoded into Non-Hispanic subjects (N = 8) as opposed to Hispanic subjects (N = 71). And yet, this new categorization of student ethnicity is highly skewed as well. Nevertheless, this question was explored by an

ANOVA procedure with exposure and ethnicity as two independent variables (factors). Results of the analysis indicated no significant main effects (exposure and ethnicity) or interaction effect (exposure x ethnicity) on the subjects' intent to stay in school. On the other hand, the main effect of ethnicity was quite close to a statistical significance (i.e., marginal significance) with the .07 probability level, F = 3.29, $partial\ eta\ squared = .04$. An inspection of mean scores indicated that non-Hispanic students were more likely to stay in school regardless of their exposure to the defined program (i.e., non-Hispanic subjects are more likely to intend to stay in school in both experiment and control groups).

Please note that Levene's test of equality of error variance was not significant, F (-3, 73) = .34, ns, indicating that the assumption of homoscedasticity was not violated. Table 4.3 presents mean scores, standard deviations, and number of subjects across Hispanic and non-Hispanic groups in experiment and control group for intent to stay in school.

Table 4.3
Mean scores based on ethnicity for intent to stay in school

Program/Control	Ethnic groups	Mean	Std. Deviation	N
Program	Non-Hispanic	3.50	.71	2
	Hispanic	3.00	.68	27
Control	Non-Hispanic	3.75	.42	6
	Hispanic	3.35	.52	42

RQ 4: To what extent will the change in engagement levels relate to a student's intent to stay in school? Changes in scores were first calculated by subtracting post-test scores from the pre-test original scores. Positive mean scores represent decreased amounts. Results of the Pearson's correlations indicated that intent to stay was significantly correlated with school work, teacher student relationships, peer support for

learning, and family support for learning, but not with academic engagement, behavioral engagement, or extrinsic motivation. Table 4.4 presents correlations between intent to stay and types of engagement.

Table 4.4 Pearson's Correlations Coefficients with Intent to Stay in School

		Intent to stay
Academic Engagement	Pearson Correlation	.17
	Sig. (2-tailed)	.15
	N	76
Behavioral engagement	Pearson Correlation	.38
	Sig. (2-tailed)	.09
	N	21
School Work CE	Pearson Correlation	.32**
	Sig. (2-tailed)	.01
	N	74
Extrinsic Motivation CE	Pearson Correlation	.06
	Sig. (2-tailed)	.60
	N	76
Teacher Student Relationship PE	Pearson Correlation	.34**
_	Sig. (2-tailed)	.00
	N	76
Peer Support for Learning PE	Pearson Correlation	.42**
	Sig. (2-tailed)	.00
	N	74
Family Support for Learning PE	Pearson Correlation	.64**
	Sig. (2-tailed)	.00
	N	75

Notes. The number of subjects varied from 93 to 96.

The following table (4.5) demonstrates changes in scores for intent to stay and engagement types. While the mean score extrinsic motivation increased as correlated to the intent to stay in school, for all other types of engagement, the mean scores decreased slightly.

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

^{*.} Correlation is significant at the 0.05 level (2-tailed).

Table 4.5 Change in mean for intent to stay in school

	Mean	Std. Deviation	N
Intent to Stay	.19	.50	76
Academic Engagement	.07	.60	76
Behavioral engagement	1.14	.36	21
School Work CE	.15	.38	75
Extrinsic Motivation CE	29	.73	76
Teacher Student Relationship PE	.13	.41	78
Peer Support for Learning PE	.10	.37	75
Family Support for Learning PE	.21	.56	75

Note. *Scores are from post-tests of both control and program groups

RQ 5 asked, to what extent does the relationship between the change in engagement and intent to stay in school vary by students' ethnicity?

This question was investigated by looking into correlations of intent to stay in school with various engagement types for Hispanic and Non-Hispanic subjects (i.e., separate correlations tables). Non-Hispanic students had stronger correlations with intent to stay in school than Hispanic students although the intent had decreased for most students in most engagement areas.

Table 4.6
Pearson's Correlations Coefficients with Intent to Stay in School by Ethnicity

			Intent to
Ethnic groups			stay
Non-Hispanic	Academic Engagement	Pearson Correlation	06
		Sig. (2-tailed)	.87
		N	10
	Behavioral engagement	Pearson Correlation	.60
		Sig. (2-tailed)	.07
		N	10
	School Work CE	Pearson Correlation	06
		Sig. (2-tailed)	.87
		N	11
	Extrinsic Motivation CE	Pearson Correlation	64*
		Sig. (2-tailed)	.05
		N	10
	Teacher Student Relationship PE	Pearson Correlation	.13
		Sig. (2-tailed)	.70
		N	11
	Peer Support for Learning PE	Pearson Correlation	20
		Sig. (2-tailed)	.57
		N	10
	Family Support for Learning PE	Pearson Correlation	.31
		Sig. (2-tailed)	.38
		N	10

Hispanic	Academic Engagement	Pearson Correlation	.16
		Sig. (2-tailed)	.14
		N	85
	Behavioral engagement	Pearson Correlation	.12
		Sig. (2-tailed)	.29
		N	85
	School Work CE	Pearson Correlation	.58**
		Sig. (2-tailed)	.00
		N	83
	Extrinsic Motivation CE	Pearson Correlation	09
		Sig. (2-tailed)	.43
		N	85
	Teacher Student Relationship PE	Pearson Correlation	.41**
		Sig. (2-tailed)	.00
		N	85
	Peer Support for Learning PE	Pearson Correlation	.63**
		Sig. (2-tailed)	.00
		N	85
	Family Support for Learning PE	Pearson Correlation	.62**
		Sig. (2-tailed)	.00
		N	85

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

The teacher of the program students was interviewed regarding her observations of the students and their behaviors. She reported increased attention and interest in class. During a classroom visit, she pointed out a student who is normally not participative in class and having many problems with his home life. He and the volunteer were discussing plans for the Christmas holiday. The teacher was amazed that the young man had opened up so much and was sure that it was because of the volunteer in the class. The volunteers were interviewed as well. While their observations included that fact that they didn't feel they necessarily had an impact on all the students, they definitely believed that they had some positive impact on many of the students.

^{*.} Correlation is significant at the 0.05 level (2-tailed).

Chapter V

Discussion

This chapter will summarize the research used to create the research questions, discuss a summary of the findings, share some limitations of the research and possible future investigation, and then state some conclusions.

Summary of Research

Many people believe that a student's engagement in school can be influenced by external forces, either positively or negatively. This belief is what has fueled the inception of many mentoring and tutoring programs as well as non-profit organizations such as Big Brothers, Big Sisters. These mentoring programs help create very deep relationships between the mentor and the student. This relationship could provide a rolemodel for the students, helping to build their self-efficacy regarding accomplishments in school. Research shows that students who are more engaged in school tend to have higher completion rates and higher grades. Engagement is affected by many factors, but mostly has been measured through academic, behavioral, cognitive and psychological engagement. Using Granovetter's theory of weak ties (1983), an adult volunteer in a classroom should be able to bring their relationships, or what would be weak ties, to the students and these relationships could help students to be more engaged in the classroom. Five research questions were proposed and answered through a pre- and post-survey and the analysis of data acquired from those surveys was used to address the research questions.

Discussion

The research showed that there was no increase in student engagement with the students who participated in the program, but that there was in fact a decrease in engagement of both the program and control students. The quasi-experimental data included a non-equivalent comparison group as more surveys were returned by the control group than the program group. The students who participated were recruited from two different campuses. The students who came from the campus used as the control group all started with a higher level of engagement and ended with a higher level of engagement than the program group, although the level of engagement had dropped from the pre-test at the beginning of the semester. It could be possible that the reason the students in the control group scored higher on all engagement questions is related to their overall performance in relation to the program school. If one considers test scores to be an indicator of student engagement, when the scores for the Texas Assessment of Knowledge and Skills for the two campuses are compared, the control group did score slightly higher than the program group, with an overall score of 84% passing at the program campus and 86% passing in the control campus (*Texas Education Agency*, 2009).

The Junior Achievement adult intervention is considered to be a very thin one, as the volunteer only interacts with the students for about seven hours total in the semester. There are many other factors that could impact the students' engagement during an entire semester. While one tries to control as many variables as possible, there could be changes in the campus, teacher or student lives that have a stronger impact than the volunteer. In an annual survey conducted by Aldine ISD, the results from the ninth grade

campuses showed that less than 70% of the students felt that their Principal cared about them or treated them respect. This number was down by 9% from the previous survey. In addition, only 37% of the student felt that adults treated the students equally, 42% felt that their schools are "in a state of chaos" and 58% felt that their classes were "dull and boring" (Dworkin, 2009). It may be that situations in ninth grade campuses are such that raising student engagement will require so much more than the volunteer's thin intervention that the results weren't going to show improvement regardless.

The ninth grade campus was started to help students with the transition to high school by creating a smaller setting where the students can feel more socially connected. This environment does eliminate some of the extracurricular activities in which the students normally participate and this could also possibly affect the students' academic engagement.

Intent to stay in school decreased slightly among the students although the mean was already at or above 3.0, showing that the students did agree that school was important and they intended to stay in school. Perhaps the questions should not be as black and white as do you stay in school or not, but framed more around how much additional education are the students planning for their future. As we learn that more and more jobs need a higher level of education than high school, perhaps adding questions regarding four-year colleges, community colleges, or vocational school would give additional insight into the impression made on the students by the volunteers.

Implications

Instinctively, people believe that the intervention of a positive adult role model can have a positive impact on the engagement of students with school. It has been

documented that increased engagement leads to a greater likelihood of completing school. Because this has been documented previously, the results of this survey are not conclusive. If it were possible to do a post-hoc analysis on the teaching styles of the individual teachers or measurement of the school climate, that might help explain the results of the survey. The comments shared by the students, teachers and volunteers showed a positive effect even though that was not reflected in the non-essay question answers. Further research should be done in this area to try and draw more definite conclusions.

In addition, Holland, Reynolds, & Weller found that some students were so engrained in their community network, that they had no desire to change their status or associations (2007). The study, done with families in Northern Ireland the Northern UK, showed that the loyalty the students felt to place and family outweighed any social capital shared with them to change their future.

Limitation and Future Studies

The response size was much smaller than was hoped for and could have very adversely affected the results. Internal validity was addressed by using separate campuses for the program and control groups to avoid contamination through student conversations outside of class. While this worked to constrain that element, it may also have added a confounding variable because of the different teachers and campus climates. Individual teachers and their teaching effectiveness have an effect on how students learn and how engaged they are in school (Graham, 2007).

The students involved in the study were attending an elective course. The seriousness with which they approach the class could affect how much attention they

actually put to answering the questions. Had the survey been a required document in a core curriculum class, there might have been more participation. Knowing that it was not for a grade may have created a somewhat cavalier attitude toward answering the questions and/or completing the survey.

Ninth grade was chosen as an appropriate level for several reasons. The district had expressed challenges with student engagement and discipline, so it appeared to be a grade level where intervention could have more impact. Ninth grade is a critical grade level (Eccles et al., 1991) but it may be that the challenges of a separated campus that lacks some of the amenities of high school campuses (more support for sports, a sense of belonging to a larger group) affect the students too strongly for them to have a high level of engagement. Selecting a different grade level, or ninth grade at a campus that includes all grade levels, might have an impact on the results.

As a state, Texas does a large amount of high-stakes testing. Including the survey for the students to complete may have caused test fatigue among the students, leading them to work half-heartedly at answering the questions.

The theories behind increased student engagement and the positive effects of adult role models offer enough evidence that future studies should focus on overcoming the limitations of this study perhaps by moving into core curricula classes and engaging more administrative support in the testing process to increase student participation. In addition, with intent to stay in school as a major factor in the study, perhaps more questions regarding intent to stay in school should have been included.

If the teacher were to offer special credit or a grade for completing the survey, that would definitely increase participation which could improve the validity of the results because of the increased pool of information.

Conclusions

The weak ties brought to the classroom by the volunteers, and the increased self-efficacy they encouraged should increase the engagement of the students in their school experience. The fact that the results of this study showed decreased student engagement imply challenges with the study and should not be taken as indicating a causal effect between the volunteer in the classroom and lower engagement. There is a large quantity of evidence showing positive effects on engagement with mentors and diversifying curriculum, therefore, the contradictory findings of this experiment should not be considered significant until corroborated or contradicted by additional research. Overall, the intent to stay questions showed that the students did intend to stay in school, which means that they have to be somewhat engaged with their education. Going forward, giving volunteers specific instructions regarding conversations about school completion could maximize the positive effects of the volunteers' intervention.

Appendix A

Research Script

Introduction:

I appreciate the opportunity to talk with you about adult volunteers presenting in your classroom. I am an employee of Junior Achievement, a non-profit organization dedicated to preparing students for their future by teaching them about business, economics, financial literacy and the importance of an education. This is done by recruiting volunteers, training them, providing materials for them to use in the classroom, and monitoring the classes as they happen. In addition to being a JA employee, I am a graduate student at the University of Houston. In my nearly 19 year career with JA, I have heard anecdotal evidence from many teachers and administrators that the adult volunteer who goes into the classroom makes a tremendous impact on the students in the class. I believe that this is true and hope to prove it through a study of the students in your class.

Purpose:

The goal of this research is to determine whether or not the students are engaged by the volunteers and if the message of the importance of an education may have additional impact when delivered by an adult volunteer who is not a teacher or parent. To this end, we will work through the JA programs to give the volunteer a structured presentation to use and to pre- and post-tests with the students to measure changes in attitude toward engagement, school, and future careers. With this data, we can see how to better prepare volunteers to be successful in the classroom, use the information to recruit more volunteers to impact the students, and use the information to help encourage teachers to invite volunteers into their classroom.

Instructions:

Students will receive a passive permission form to take home to their parent/guardian. If the form is not returned denying consent, it will be assumed that the student can participate in the study. Students will then receive a pre-test to develop baseline data on attitudes toward school, learning, continued education and careers as well as knowledge questions related to the content of the JA program being presented to the students. After the volunteer has completed their 7 required visits, the students will complete a post-test of those same questions. The tests will be compared based on minimum information gathered from the students, three letters of their last name and their date of birth. The tests will be matched and only those with both a pre- and post-test will be used. The results of the test will be shared with you, the classroom teacher, and the Principal of the school.

If you have any questions during the process, please don't hesitate to contact me at (713) 392-8278 or janderson@jahouston.org.

Appendix B

Student Survey Questionnaire Success Skills

Please take a few minutes to answer the questions on this survey. This will help us measure the effectiveness of the JA program as well as learning more about student engagement. Thanks for your help! Please fill out the survey completely. You will not be identified by your answers. On short answer responses, please write so your answers can be read.

Student Information

What are the first three let	tters of your last name?]	
When were you born?	Month	Day		1 Y	9 'ear		
What grade are you in? (I	Please check only one.)	□9 th	□10 th	□11 th	□12 th	□Other:	
What period is this class?							
What is the name of your	teacher?						
What is your gender?	☐ Male ☐ Fem	nale					
What is your ethnic backg	What is your ethnic background? (Please check all that apply)						
☐ White/Caucasian	☐ Hispanic/Latino	☐ Blac	k/Africaı	n America	an	☐ Asian	
☐ Pacific Islander	☐ American Indian/Alas	kan Nativ	ve				
☐ Other (please specify):							

*****PLEASE GO TO NEXT PAGE*****

Knowledge Questions

1.	The key to building rapport with others is:
2.	The ability to cooperate and communicate in the workplace is essential. What are two ways to communicate with others in the workplace?
	a. b.
3.	
4.5.	Employers want employees who can: a. Smile occasionally b. Chat with other employees c. Troubleshoot problems immediately When marketing yourself, why is it important to reflect on and evaluate your personal information before sharing it with a potential employer?
6.	When interviewing for a job, what are three important skills to remember? a. b. c.

Please indicate how much you agree or disagree with each of the following statements.

		Strongly			Strongly
1	O11 - d144 m	Disagree	Disagree	Agree	Agree
1.	Overall, adults at my school treat students fairly.				
2.	Adults at my school listen to the students.				
3.	At my school, teachers care about students.				
4.	My teachers are there for me when I need them.				
5.	The school rules are fair.				
6.	Overall, my teachers are open and honest with me.				
7.	I enjoy talking to the teachers here.				
8.	The tests in my classes do a good job of measuring what I'm able to do.				
9.	Most of what is important to know you learn in school.				
10.	The grades in my classes do a good job of measuring what I'm able to do.				
11.	What I'm learning in my classes will be important in my future.				
12.	After finishing my schoolwork I check it over to see if it's correct.				
13.	When I do schoolwork I check to see whether I understand what I'm doing.				
14.	Learning is fun because I get better at something.				
15.	Other students at school care about me.				
16.	Students at my school are there for me when I need them.				
17.	Other students here like me the way I am.				

Please indicate how much you agree or disagree with each of the following statements.

		Strongly			Strongly
		Disagree	Disagree	Agree	Agree
18.	I enjoy talking to the students here.				
19.	Students here respect what I have to say.				
20.	I have some friends at school.				
21.	I plan to continue my education following high school.				
22.	Going to school after high school is important.				
23.	School is important for achieving my future goals.				
24.	My education will create many future opportunities for me.				
25.	My family/guardian(s) are there for me when I need them.				
26.	When I have problems at school my family/guardian(s) are willing to help me.				
27.	When something good happens at school, my family/guardian(s) want to know about it.				
28.	I'll learn, but only if the teacher gives me a reward.				
29.	I spend the majority of my time in class focused on the lesson.				
30.	I participate in after-school programs when I can.				
31.	I take time at home to do my homework whenever I need to.				
32.	My family/guardian(s) want me to keep trying when things are tough at school.				
33.	I'll learn, but only if my family/guardian(s) give me a reward.				

*****PLEASE GO TO NEXT PAGE ONLY IF YOU HAVE COMPLETED YOUR JA PROGRAM****

	***	****			
	POST-SURVEY	QUESTIC	NS ONL	Y	
	ase respond to Sections V and VI only after your serve was as we want to Sections and VI only after you	_			_
	*****	a ale ale ale ale ale ale ale al		4. 4. 4. 4. 4. 4. 4. 4.	, ofe ofe ofe ofe ofe ofe of
	Program Satisfaction		L - C-11	4-4	
Pie	ase indicate how much you agree or disagree	with each of t	ne following s	tatements.	
		Strongly	D.		Strongly
_	. I enjoyed the Junior Achievement program.	Disagree	Disagree	Agree	Agree
	The Junior Achievement volunteer		_	_	
	presented the program in an interesting				
9	way The Junior Achievement volunteer				
	explained things in a way I could understand.				
1	0. The Junior Achievement volunteer was a	П	П	П	П
1	role model that I could look up to. 1. The Junior Achievement volunteer	_	_	_	_
1	positively impacted my decision to further				
_	my education				
VI	. Program Impact and the Futur	e			
12.	List two things you learned from the Junior Acl	nievement prog	gram that you	think are im	portant:
	a.				
	b.				
13.	Have your plans for the future – your education			our plans fo	or saving
	money, etc. – changed since you have participa	ted in the prog	ram?		
	a. Yes, my plans have changed. Explain how:				
	b. No, my plans have not changed.				

Appendix C

Student Survey Questionnaire Financial Literacy

Please take a few minutes to answer the questions on this survey. This will help us measure the effectiveness of the JA program as well as learning more about student engagement. Thanks for your help! Please fill out the survey completely. You will not be identified by your answers. On short answer responses, please write so your answers can be read.

Studer	nt Information				
1.	What are the first three letters of your last name?				
2.	When were you born? Month Day Year				
1.	What grade are you in? (Please check only one.) □9th □10th □11th □12th				
	□Other:				
2.	What period is this class?				
3.	What is the name of your				
	teacher?				
4.	What is your gender? □ Male □ Female				
5.	What is your ethnic background? (Please check all that apply)				
	☐ White/Caucasian ☐ Hispanic/Latino ☐ Black/African American ☐				
	Asian				
	☐ Pacific Islander ☐ American Indian/Alaskan Native				
	☐ Other (please specify):				

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Knowledge Questions

 11.	A spending plan for managing money during a given period of time is called
a.	Interest
b.	
c.	
d.	<u>*</u>
 12.	Which of the following would tend to be a low-risk investment?
a.	Savings accounts
b.	Real estate
c.	
d.	Collectibles
 13.	A disadvantage of credit is?
c.	It allows you a way to pay emergency expenses.
d.	It encourages impulse spending.
e.	It allows you to establish credit.
f.	It allows you to buy now and pay later.
 14.	An example of a variable expense would be
a.	Rent
b.	Car insurance
c.	Electricity bills
d.	School loan
 15.	Which of the options below is not a traditional type of expense?
d.	Fixed expense
e.	=
f.	Periodic expense
g.	Variable expense
 16.	Which of the following actions could put your personal information at risk?
a.	Shredding credit card information.
b.	Downloading free software to your personal computer.
c.	Ordering a copy of your credit report.
d.	Regularly reviewing financial statements.
 17.	A risk taken when obtaining credit is?
a.	You may not be able to pay your bill on time.
b.	
c.	You may have to pay interest on what you borrowed.
А	All of the above

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18.	Christina was seriously injured in a car accident and will not be able to return to work for several months. What kind of insurance does she need?
a.	Automobile insurance
b.	Property insurance
c.	Life insurance
d.	Liability insurance
19.	What kind of insurance protects personal possessions in the event of fire, flood, theft, etc.?
a.	Automobile insurance
b.	Property insurance
c.	Life insurance
d.	Liability insurance

Please indicate how much you agree or disagree with each of the following statements.

		Strongly Disagree	Disagree	Agree	Strongly Agree
3.	Overall, adults at my school treat students fairly.				
4.	Adults at my school listen to the students.				
5.	At my school, teachers care about students.				
6.	My teachers are there for me when I need them.				
7.	The school rules are fair.				
8.	Overall, my teachers are open and honest with me.				
9.	I enjoy talking to the teachers here.				
10.	The tests in my classes do a good job of measuring what I'm able to do.				
11.	Most of what is important to know you learn in school.				
12.	The grades in my classes do a good job of measuring what I'm able to do.				
13.	What I'm learning in my classes will be important in my future.				
14.	After finishing my schoolwork I check it over to see if it's correct.				
15.	When I do schoolwork I check to see whether I understand what I'm doing.				
16.	Learning is fun because I get better at something.				
17.	Other students at school care about me.				
18.	Students at my school are there for me when I need them.				
19.	Other students here like me the way I am.				

Please indicate how much you agree or disagree with each of the following statements.

		Strongly Disagree	Disagree	Agree	Strongly Agree
20.	I enjoy talking to the students here.				
21.	Students here respect what I have to say.				
22.	I have some friends at school.				
23.	I plan to continue my education following high school.				
24.	Going to school after high school is important.				
25.	School is important for achieving my future goals.				
26.	My education will create many future opportunities for me.				
27.	My family/guardian(s) are there for me when I need them.				
28.	When I have problems at school my family/guardian(s) are willing to help me.				
29.	When something good happens at school, my family/guardian(s) want to know about it.				
30.	I'll learn, but only if the teacher gives me a reward.				
31.	I spend the majority of my time in class focused on the lesson.				
32.	I participate in after-school programs when I can.				
33.	I take time at home to do my homework whenever I need to.				
34.	My family/guardian(s) want me to keep trying when things are tough at school.				
35.	I'll learn, but only if my family/guardian(s) give me a reward.				

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POST-SURVEY QUESTIONS ONLY Please respond to Sections V and VI only after you have completed the Junior Achievement Program ************************************					
V. Program Satisfaction Please indicate how much you agree or disagr	Strongly Disagree			Strongly	
14. I enjoyed the Junior Achievement progra		Disagree	Agree	Agree	
15. The Junior Achievement volunteer presented the program in an interesting way.		_	_ _	<u> </u>	
 The Junior Achievement volunteer explained things in a way I could understand. 					
17. The Junior Achievement volunteer was a role model that I could look up to.					
 The Junior Achievement volunteer positively impacted my decision to further my education 	er 🔲				
VI. Program Impact and the Fut 19. List two things you learned from the Junior c. d.		gram that you	think are im	portant:	
	 Have your plans for the future – your education or your career or your job, your plans for saving money, etc. – changed since you have participated in the program? 				
c. Yes, my plans have changed. Explain how	v:				
d. No, my plans have not changed.					
Survey based on the Junior Achievement Texas ©2009 JA at This project has been reviewed by the University of I	Appleton	, J., Christenson, S	S., Kim, D., & I	Reschly, A. page 53	

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