

Developmental Entrepreneurship Education for Ethnic Minorities:
A Cautious Ray of Hope for Instructional Reform

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Abstract

The No Child Left Behind Act (NCLB) and the intensifying national efforts to rethink and reinvent high schools underscore the need to identify instructional strategies that support a rigorous and relevant curriculum and encourage students to become engaged in a lifetime of learning. Within this context, this article reviews empirical findings from an entrepreneurial, intervention project implemented in nine public schools in Newark, New Jersey to improve student achievement. Prior research based on this project reveals that students using these learning strategies not only demonstrate greater overall entrepreneurial characteristics, but they also demonstrate higher achievement motivation, more personal control, and greater self-esteem than a comparable cohort. (Rasheed & Rasheed, 2003) An analysis of this successful, entrepreneurial intervention and its interrelated components is designed to stimulate further research and dialogue on classroom practices that will improve students' achievement.

This article proposes that specific instructional strategies, in a curriculum that interests students, have the potential to increase academic performance and engage students in a life of learning. These specific instructional strategies are learner-centered and include personalized, small learning communities that reflect students' interests, learning projects related to solving real life problems, cooperative group learning, an environment of respect and support, and hands-on activities.

The article contends further that the findings regarding classroom environment, instructional strategies, and teacher-student interactions are particularly relevant to ethnic minorities who often become disengaged in traditional classrooms. This article supports the need for further research on learner-centered, instructional strategies, student-teacher interactions, and the social context for learning to improve students' social engagement in learning and academic achievement.

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Introduction

In 2001, the Elementary and Secondary Act legislation was reauthorized as The Leave No Child Behind Act (NCLB) to place special emphasis on the importance of basing educational practice on empirical research. The reauthorization also required that our nation's public school systems become more accountable for the learning of students, for improving the educational achievement of all students, and for closing the achievement gap between advantaged and disadvantaged segments of the student population.

In addition to accountability for the education of each child, the ultimate goal of the landmark federal legislation is to insure that future generations will be educated to maintain America's competitive edge in trade, manufacturing, technology, entrepreneurship, and higher education. The NCLB accountability efforts, the national high school reform movement, global competitiveness, and the 21st century workforce needs highlight the urgency to develop a highly educated, skilled, and creative workforce. There are abundant national data that traditional comprehensive high schools produce too many students who are underachieving, dropping out, turning to violence, and becoming disengaged in the civic and economic future of America (Balfanz, R & Nettie, L, 2004; Hall, D. 2005). Students of color are often over represented among dropouts, underachievers, and disengaged adolescents. Many of these students graduate without the tools they need to succeed in higher education or in the workforce of the 21st century (Achieve, 2004; Balfanz, R & Nettie, L, 2004; Barton, 2005; Brand, 2004; Haycock, K. & Huang, S. 2001; Harvey & Housman, 2004). Unfortunately, research on middle school reform efforts (that began in the 1970s to identify best practices to engage and motive middle school youth) still does not seem to identify particular instructional strategies that are linked to student achievement (SREB, 2004).

Moreover, as indicated by the latest data from the National Center for Education Statistics and other national reports, youth in America are falling behind other industrialized countries in the academic achievement (Balfanz, R & Nettie, L, 2004; Barton, 2005; Sen & Partelow, 2005). To compete, America is depending more and more on its immigrant population for talent in areas such as science and engineering. Of the recent doctorates awarded in engineering, approximately 51

percent of individuals earning them were not born in the United States (Cavanagh, 2005).

As Americans we cannot afford the enormous societal losses of unrealized human potential—intellectual, creative, and entrepreneurial. These losses are borne as costs to all Americans, as our social systems strain to respond to the growing economic dominance of other countries (Barton, 2005). Even though there are numerous best practices throughout the United States that reflect exemplary schools and teachers, there is still a need to identify and implement effective instructional strategies that engage more students in America to become lifelong learners (Learning Outside the Lines, 2002).

Tatum (1997) makes a convincing case that teaching and learning in America occurs within the social context of racial and cultural identities of the students and teacher. This context includes predispositions about the intellectual capabilities of persons of color, negative messages regarding the future potential of developing adolescents of color, and oppositional identities assumed by some students of color. The social context of education highlights the need for supportive teachers and other adults to intervene to help students internalize their potential for success within the complex American society. Most parents of these adolescents, Tatum goes on to state, want their children to develop an “internalized sense of personal security” that will help them recognize the social context of public education, respond effectively to it, and proceed to lead responsible and productive lives. *In Learning While Black*, Hale (2001) affirms that underachievement of students of color in public education in America is related to what happens in the classroom and the lack of support to navigate the cultural context. She attests that educational reform must acknowledge and employ appropriately the cultural context of education to improve the academic performance of students of color.

Wentzel & Wigfield (1998) also attest that there is an intricate connection between instructional strategies, psychological attitudes, and characteristics that emerge in learners. Positive attitudes towards learning, exploration, and future prospects are valuable learning characteristics that influence student outcomes. Entrepreneurial programs appear to offer one solution to help students emerge more empowered within the social context of learning. Research on entrepreneurial programs relates positive affects on overall attitudes of students towards learning and future goal setting when engaging in such instruction (Brockhaus, 1980; Begley & Boyd, 1987; Montago, Kuratko, & Scarella, 1986; Boyd & Vozikis, 1994; Krueger & Brazeal, 1994; Littunen, 2000).

Findings from entrepreneurial project in New Jersey reinforce that there are promising, student-centered, instructional strategies that can be used for structuring entrepreneurial career paths, engaging students, helping students' develop a sense of personal control, and for rethinking how instruction is delivered in America's schools (Rasheed & Rasheed, 2003). This theme-based instructional intervention furnishes empirical support for varying instructional strategies and classroom practices to affect students' academic achievement motivation, self esteem, and personal control. Because the New Jersey project demonstrated that the entrepreneurial intervention did affect students' attitudes towards achievement, the New Jersey project was analyzed further to determine if the intervention also improved the academic achievement of students.

The analysis reviewed in this article contributes to the larger conversations on educational reform and the more focused conversations on instructional strategies that correlate with improved academic outcomes for students. The discussions in this article should have implications for policy makers and educators searching for instructional strategies to engage more youth, to motivate them, and to improve their academic achievement.

Entrepreneurship Education

Entrepreneurship education generally refers to programs that promote awareness of self employment as a career choice and skill training for business creation and development. It is distinguishable from other forms of business or career education such as Junior Achievement because the purpose of entrepreneurial education is to create a new business entity, product, or service which results in higher economic value (Hanesmark, 1998). Entrepreneurial education can prepare youth for new venture initiation by helping them develop the knowledge and relevant skills that improve self-efficacy and effectiveness (Gorman et al., 1997).

Moreover, research suggests identifying and nurturing potential entrepreneurs throughout the education process could produce many long-term economic benefits (McClelland & Winter, 1969; Hatten & Ruhland, 1995 & Hansemark, 1998). Banaszak (1990) suggests that entrepreneurial programs in middle grades provide knowledge of the role and function of entrepreneurs in a market driven economy and help students understand and practice entrepreneurial characteristics such as self-esteem, willingness to take risks, innovativeness, and acceptance of responsibility for personal actions and persistence.

Effective youth entrepreneurship education is also linked to preparing young people to be

responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers and contribute to economic development and sustainable communities, mitigating some of the limitations of traditional middle and high school curriculums (Ashmore, 1990; Harvey, J. & Houseman, N. 2004). Similarly, research on entrepreneurship education credits it with developing and nurturing entrepreneurial motivation and skills in young students (Hatten and Ruhland, 1995; Ede, Pnigrahi, & Calcich, 1998).

An inherent assumption in entrepreneurial education is that entrepreneurship characteristics and skills can be developed. Research suggests that the propensity towards entrepreneurship has been associated with several personal characteristics that can be influenced by a formal program of education (Gorman et al., 1997; Bechard & Toulouse, 1998). Education can prepare for new venture initiation by transferring knowledge and developing relevant skills that improve the self-efficacy and effectiveness of the potential entrepreneur (Gorman et al., 1997). Currently, there is not a consensus regarding when educational intervention is most effective in developing entrepreneurial potential.

As stated earlier, there is empirical support for the efficacy of entrepreneurial education in developing entrepreneurial characteristics such as achievement motivation, self-esteem, and personal control. These are arguably also desirable characteristics for student development and needed interventions for students of color who are likely to receive negative messages regarding achievement potential. What prior studies have not adequately addressed is the effect of entrepreneurial education on academic performance.

The increased achievement motivation results revealed in the New Jersey project suggest the need for further analysis concerning academic performance in related coursework tested for this article. Since the need for achievement is based on expectations of doing something better or faster than others or better than the person's earlier accomplishments (McClelland, 1961, 1965), and it also relates to planning and striving for excellence (Hansemark, 1998), it was hypothesized that there would be a noticeable improvement in academic performance:

It is therefore hypothesized that:

Hypothesis: Students receiving entrepreneurial training will obtain higher academic performance scores in the related academic subjects than students in the control group

The Study and Methodology

In 1997, 502 upper elementary and middle schools in Newark, New Jersey were selected to participate in a 26 week entrepreneurial program using the KidsWay curriculum. This population included nine schools and 28 classes ranging from grades 4 through 8. Students were divided into a treatment group and a control group. Students in the 13 treatment classes engaged in entrepreneurship education and training. Students in 15 classes were designated as the control group, and they were involved in other activities during the same class period (Rasheed & Rasheed, 2003). The goal of the program was to determine whether inner city students could be motivated to improve academic achievement with a theme-based entrepreneurial educational and enterprise intervention.

KidsWay is a youth entrepreneurship curriculum that employs student-centered, active learning strategies. Teachers in the treatment group participated in standard KidsWay professional development to minimize differences in teacher effectiveness. Students were encouraged to explore course concepts by completing tasks that demonstrate reflection and elaboration on course content (Hammer, 2000). The active learning strategy is distinguishable from traditional methods because it includes mini-lectures integrated with group activities and games that reinforce learning objectives. Semi-structured experiential techniques involved completing a group task or project that used real business situations as the context for learning (Hammer, 2000). As part of the class experience students developed and implemented a class-based enterprise.

The treatment group engaged in an entrepreneurship training class for three hours each week for 26 weeks using KidsWay curriculum as an alternative intervention strategy for improving academic achievement. The learning strategies in the KidsWay curriculum also include active experimentation, concrete experience, and behavioral simulations. The skill-building component includes negotiation, leadership, creative thinking, exposure to technological innovation, and new product development. Students were also taught how to detect and exploit business opportunities and long-term business planning. The control group engaged in other non-academic classroom activities such as art and music, during the same class period (Rasheed & Rasheed, 2003).

The study population of 506 students consisted primarily of ethnic minority students (56.4% Hispanic/Latin; 34.7% African American; 3.6% Caucasian; 1% Asian; and 4.4% no response). Frequency distribution by grades was: 4th grade—29%; 5th grade—30%; 6th grade—23%;

7th grade—15%; and 8th grade—3%. Males represented 49.3% and females 50.7% of the sample (Rasheed, H. & Rasheed B., 2003). A random sample of 144 students was selected for grade analysis, with equal distribution between the treatment and control groups.

The measurement variables were letter grades recorded on office copies of student report cards converted to numerical scores, i.e., Superior=5, Excellent=4, Good=3, Fair=2, Poor=1.

A descriptive statistics analysis was performed to determine differences within group and between group regarding academic performance. The within group analysis for the treatment group before the intervention and after, yielded positive results for the following specific subject areas:

- Reading—the difference in average scores was 13.2% higher.
- Language—the difference in average scores was 6.1% higher.
- Social Studies—the difference in average scores 11.3% higher.

In terms of between group descriptive analysis, entrepreneurship classes (treatment group) scored better than non-entrepreneurial classes (control group) in the following subject areas:

- Reading—the difference in average scores was 16.4% higher.
- Language—the difference in average scores was 15% higher.
- Spelling—the difference in average scores was 15.3% higher.
- Math—the difference in average scores was 18.7% higher
- Social Studies—the difference in average scores was 19.5% higher.
- Science—the difference in average scores was 39% higher.

Using inferential statistics, a t-test was used to analyze within group differences between the academic performance of the treatment group in the academic year prior to participating in the entrepreneurial education program. The results indicated the following:

- Reading grades were higher for the entrepreneurial group ($p < .05$); mean difference was 1.912
- Language Arts grades were higher for the entrepreneurial group ($p < .10$); mean difference was 1.781.
- Social studies grades were higher for the entrepreneurial group ($p < .001$); mean difference was 3.868

Comparing the entrepreneurial class to the control group, the academic performance differences were as follows:

- Reading grades increased significantly ($p < .10$); mean difference was .1517.
- Language arts grades increased significantly ($p < .10$); mean difference was .1344.
- Spelling grades decreased significantly ($p < .10$); mean difference was .1909.

- Social studies grades increased significantly ($p < .01$); mean difference was .2534.
- Science grades increased significantly ($p < .001$); mean difference was .68

The results of this analysis indicates support for the general hypothesis derived from the conclusion that students that are achievement motivated will have improved and better academic performance. Specifically students in entrepreneurship classes scored significantly better than non-entrepreneurial classes in reading, language, spelling, social studies and science. Additionally, grades improved for the entrepreneurial class between years for reading, language arts, and social studies. By analyzing between groups and within groups scores, this study confirms the effectiveness of entrepreneurial studies on academic performance and suggests promising implications for developing effective intervention strategies for minority students in primary grades.

Discussion

How innovative was this intervention for students participating in the New Jersey program? There are indications that the traditional classroom instructional design is not particularly supportive of entrepreneurship and may result in the suppression of entrepreneurial characteristics (Chamard, 1989). Kourilsky (1990) found that 25 percent of kindergartners demonstrate entrepreneurial characteristics (i.e., need for achievement and risk taking) compared to 3 percent of high school students. Singh (1990) concludes that the traditional instruction and education environment should be reoriented to emphasize and value entrepreneurial attitudes at the pre-collegiate level and to encourage entrepreneurship as a career choice. Students' improvement in academic achievement scores also supports the link between achievement attitudes and academic gains in traditional coursework. Moreover, the social context of the traditional classroom reinforces the social stratification for many students of color and results in oppositional strategies regarding learning and future potential (Hale 2001; Tatum 1997).

In *Learning Outside the Lines* (2002), six vignettes of promising instructional practices in schools located in various settings around the United States are highlighted. These vignettes describe diverse instructional strategies that serve underprivileged youth and help them become confident learners. Further, the six vignettes are brief but vibrant examples of instructional strategies that result in engaged, future oriented, and high achieving students. Research reviewed for this article supports the authors' assertions in *Learning Outside the Lines* that we know that

youth thrive in settings where there are caring relationships that help them persist past obstacles; where there is challenging curriculum content that interests them; where there are learning communities which encourage peer support and collaboration; and where they can develop significant relationships with adults. However, effective instructional strategies and teacher-student interactions are often viewed in isolation, without empirical analysis, and not examined beyond surface levels.

To examine the effectiveness of the New Jersey entrepreneurship education project as an overall intervention strategy that can lead towards improved academic achievement for students, it is useful to view the interrelated components of the intervention: 1) theme based curricular content, that interests students, 2) specific instructional strategies, and 3) enabling classroom environment with positive student-teacher interactions. An analysis of the literature shows that each of these interrelated components contribute to improved academic achievement for students and can be found in effective schools around the nation.

Theme-based Instruction

The Bill and Melinda Gates Foundation has become a major catalyst in stimulating national discussions on how we structure education particularly at the high school level. Responding to the national dropout rates and the lack of engagement by a significant portion of the high school population, the Gates Foundation has funded numerous reinventing high school projects around the nation. These *New School Projects* focus on the three R's: rigor, relevance, and relationships. The need for more rigorous academic content not only answers America's need to compete internationally, but it responds to the perceptions of numerous high school students that school is not challenging. The projects are based on the assumption that high schools will be more effective if they are smaller, more personalized, student-focused units that are rigorous, relevant to students' lives, and places of significant relationships for students. The high school reform projects include themed high schools that are also smaller schools (100 students per grade) that afford teachers and students the opportunity to form smaller learning communities that respond to students' interests. In addition to serving as innovative experiments designed to discover various pathways to rigorous and relevant learning, the high school reform projects seek to identify learning strategies and organizational structures that will enhance positive relationships between students and teachers.

The results from the New Jersey project and the research on career academics (Brand, 2004) suggest that theme-based instruction can be effective in engaging students and ultimately improving

students' academic performance in related academic subjects. Brand further states that teachers often work together in teams in career academics; students are grouped with a core of teachers; and the family-like atmosphere often promotes close teacher-student relationships.

In Cincinnati Ohio, Entrepreneur High School, a theme-based entrepreneurship high school, applies theories and concepts in core courses to the business world. Additionally, courses are available in advertising, market research, banking, investing, and forecasting a product's supply and demand to teach students how to start and operate a business. Early data from the entrepreneur school reveal that students have improved in academic proficiency and retention. The early success of Entrepreneur High School seems linked to the common curriculum focus and the positive behavior support for students embodied in the theme of the high school--Life is choice, choices matter. The entrepreneurial theme is viewed as valuable for preparing students for life-long learning and life after high school (Matthews, C. & Morris, J, 2005). Entrepreneur High School implements several of the interrelated components identified in this article as affecting improved student academic performance. It is a theme-based high school in which instruction in core academic subjects are relevant to the real world of business. Student teacher and student-mentor relationships are encouraged. Students are paired with mentors from local small businesses or placed in internships at local companies. Instructional strategies include business simulations and writing a business plan to start a business. Most importantly, the combinations of the aforementioned interrelated components results in improved academic achievement for students.

The Southern Regional Education Board highlights Project Lead the Way in *High Schools that Work* as an example of a national, theme-based, activity oriented curriculum designed to increase the number of engineers in our country (Project Lead the Way, 2003). The curriculum, when combined with middle school and college preparatory courses, introduces students to the discipline of engineering in a hands-on, problem-solving environment. The middle school curriculum, Gateway to Technology, is constructed to introduce students to project-based learning in an exciting and fun format. In the Gateway program, students are expected to pursue integrated study in math, science, and technology to strengthen their knowledge content and to provide a foundation of knowledge and skills for success in pre-engineering. In the high school theme-based curriculum, students take introductory engineering courses such as principles of engineering, introduction to engineering design, digital electronics,

and computer integrated manufacturing. The introduction of students to engineering content, project based problem solving, and an integrated subject matter is designed to attract students and to demonstrate the relevancy of concepts. The need for data analysis on programs like Project Lead the Way is crucial for an in depth understanding about theme-based best practices and future decision making regarding teacher practices and student achievement.

Instructional Strategies and teacher-student interactions

Sanders and Rivers (1998) affirm that there is a growing body of research that supports the link between good teaching and academic achievement for all students. Good teaching is the crucial link in attaining and sustaining academic achievement for students, regardless of race and other variables. The contribution of good teaching to student achievement is so large that it exceeds any student characteristic (i.e. social economic status). Further, the research of Sanders & Rivers (1998) demonstrates that there is a statistically significant higher achievement for students taught for several years by effective teachers. Wenglinsky (2000) reports, however, that evidence has been inconclusive regarding specific instructional strategies that effective teachers practice in the classroom that are different from those ineffective teachers practice (to affect the academic performance of students). Possibly the case study approach used by Kubitskey & Fishman (2004) can be a valuable research methodology to examine classroom practice and to identify specific instructional strategies used by effective teachers.

The Kidways curriculum included learner-centered instructional strategies such as simulations, gaming, cooperative group work, starting an enterprise, and role-playing that allowed students to formulate responses that are entrepreneurial and active (Kent, 1990). Experienced-based programs that encourage students to be active rather than passive learners and empower students to actually make decisions tend to be successful in helping students acquire knowledge and skills (Wenglinsky, 2000). Current research on the effect of peer support (in group activity) on student achievement supports the hypothesis that peer interactions are positively linked to improved student achievement (Hanushek, E, Kain, J., Markman, J., 2001). Additionally, effective teachers tend to use cooperative groups in which students learn from the teacher and share their knowledge with their peers.

McKinley (2005) studies instructional strategies in twenty-nine urban classrooms and concludes that changes in student/teacher interactions can result in improved achievement for African American students. McKinley found that improved achievement of African American

students correlated with instructional strategies that are used in the context of caring and respectful relationships between teachers and students and among students. Furthermore, African American students responded well to instructional strategies that employed cooperative learning, collaborative and democratic practices, verbal expression and movement, and real-life activities relevant to the curriculum. Teachers who were effective in improving the academic achievement of African American students believed their success was related to the positive relationships they developed with the students and their overall fairness in classroom interactions.

Munns (2003) views the teacher's ability to engage students as the "centralizing factor" for implementing effective instructional strategies that lead to improved student achievement. He affirms that student engagement results in an educational identity that is significantly influenced by the messages that students believe the teacher is communicating to them. Munns purports that students internalize these messages, and the messages shape how students see themselves as learners. Sometimes students perceive that they are receiving disengaging messages from teachers regarding their ability, knowledge, place, and power in the classroom. Both Tatum (1997) and Hale (2001) also discuss the significant influence that imbedded racial and social messages have for influencing the learning environment and responses to learning for people of color. Acknowledging these interrelated racial and social contexts will empower students and help teachers become more effective in engaging students of color.

In *Learning Outside the Lines: Six Innovative Programs that Reach Youth* (2002), the authors note that youth thrive in programs where there are opportunities for them to have a *voice and a choice*. Kahle, Meece, & Scantlebury (2005) demonstrate that there is a link between inquiry-oriented teaching, strategies that involve interactive and stimulating laboratory experiences in a noncompetitive environment, and African American students' attitudes and perceptions of science. Wentzel and Wigfield (1998) review research on social and academic constructs that relate to, and predict, students' academic performance, persistence, and choice of academic pathways. They affirm that recent studies support theories that students' social motivation and their personal relationships with teachers and peers strongly influence their academic performance and overall adjustment to the school environment.

Similar to Wentzel and Wigfield (1998), McKinley (2005) discusses the links between social context, learning, and student achievement. McKinley relates how effective teachers negotiate the power relationships in the classroom to establish a climate of mutual respect.

Effective teachers also promote collaborative, democratic processes in the classroom. They share responsibilities and appropriate decision making with students. Denbo (02) affirms that all learning and teaching is filtered through cultural lens. Often there is discord between the classroom activities and the culture of African American students. Teachers, however, can “tune into” their students’ culture, worldviews, verbal communication, social values and develop instructional strategies that will engage and motivate students. Brand (2004) affirms that the record of success of career academics has much to offer high school reform. Career academics have demonstrated the importance of responding to the needs of students and the communities they represent. Additionally, career academics have experience in improving academic achievement with personalized learning communities.

The Future

Can the aforementioned inrelated components be used on a larger scale as interventions for students of color who are not performing well academically in schools around the United States? Rushing (1990) recommends entrepreneurship education programs for African-American youth because they are underrepresented among successful entrepreneurs. Rushing further affirms that entrepreneurial instruction could help to mitigate obstacles many African-Americans encounter in formal education. He identifies these obstacles as the lack of role models, low self-esteem, and the frustration of failure. Yet, there has been limited evidence that entrepreneurship education has been used extensively as an intervention strategy for overcoming such obstacles. Barton (2005) agrees that we need to know more about what happens in alternative schools and intervention programs like *Talent Development*, especially if these programs seem to be effective in mitigating drop out rates and engaging students

Carey (2005) points out that the academic achievement gap too often coincides with low-income students, and/or minority students, and inexperienced teachers. Some students are assigned to ineffective teachers for as many as three years exasperating the academic achievement gap. Contacts with significant teachers and counselors are often minimal or negative. As an alternative to these situations that disproportionately affect students of color, MacDowell suggests that a well-designed entrepreneurial training program can provide the hidden curriculum skills that are important to educators and

employers. Gray (2004) offers that career academies and theme-based education can motivate students considered *at risk* to overcome academic deficiencies and social limitations to pursue desired careers.

Barton (2005) argues that even though America promotes public education to all; the social contract contains fine print. There are limited options for students who experience dissonance in the current educational structures. Further, there are limited opportunities for getting youth back on track to complete high school and lead their most productive lives. Barton states further that by examining the successful instructional strategies we have employed in public education we can learn much.

The New Jersey project was originally designed to investigate the effects of entrepreneurship training and enterprise on the entrepreneurial characteristics of intermediate level students with hopes that the results would be a positive intervention for motivation and academic performance. Moreover, the study was designed to determine if the findings would support the supposition that entrepreneurial training and enterprise creation was an intervention strategy that would have positive benefits for the academic performance of ethnic minorities. The research did provide empirical evidence to support these hypotheses, finding that a composite of entrepreneurial characteristics was significantly greater for students engaged in entrepreneurial training and a classroom-based enterprise (Rasheed & Rasheed, 2003).

Because the New Jersey entrepreneurial project employed a control and treatment group of comparable students, the findings also lend support to the research that argues that changes in instructional strategies and positive student-teacher relationships can affect students' achievement, self-esteem, and achievement goal orientations (Wentzel & Wigfield, 1998; McKinley 2003; Munns (2003). The findings indicate that some aspects of the instructional and classroom component of the treatment group served as mediating factors to stimulate students' motivation, achievement orientations, and higher sense of personal control (Wentzel & Wigfield, 1998). Likewise, the instructional experiences and classroom interactions in the treatment group resulted in students performing better in related academic subjects.

It is difficult to determine the exact influence of student and teacher relationships to the achievement results, as discussed by McKinley (2005) and Munns (2003). The findings from the New Jersey project do not include empirical data for analysis of relationship interactions. More empirical data are needed to identify further what type of student/teacher relationships are

positively correlated with the higher academic performance of students, and when should these interactions be varied.

The findings of the New Jersey project relate to the effects of entrepreneurship training and enterprise experience on entrepreneurial characteristics on predominately ethnic minorities in a low-income urban setting (Rasheed & Rasheed, 2003) and improved academic performance of students in related subjects. Other research, however, suggests that changes in instructional strategies and student-teacher interactions would be as relevant to the general student population at all school levels (Wentzel & Wigfield, 1998). The instructional strategies and instructional climate employed in the New Jersey project have been identified in various research articles as having positive affects on students' self-esteem, academic achievement, and engagement. (Barton, 2005; McKinley, 2005; Munns, 2003). Research supports that the New Jersey project included components that are linked to student motivation and academic achievement. These interrelated components are curriculum of interest or theme-based instruction, instructional strategies that include active learning and real-life problem solving, and positive student teacher and peer relationships.

What does our future look like? Our challenge remains to employ the cultural context for learning to empower and enable all students (Hale 2001; Tatum 1997). Winglinsky (2000) affirms the need to link student achievement with recruiting, retaining, and developing high quality teachers who can function well within the cultural context of educational environments. A scan of educational publications leaves us with a cautious ray of hope.

Five years after presenting the initial findings of the Newark Project to the principals of the schools in the study, the Commissioner of Education in New Jersey announced a major new initiative In May 2005, to change the organization and structure of middle schools and high schools in New Jersey's low-income communities. One of the plan's goals is to develop smaller learning communities that employ theme-based instruction by reconstructing middle schools and high schools into smaller units. Another is to strengthen the alignment between middle school and high school by preparing middle school students for college preparatory work. Likewise, high school students would be prepared for college work or demanding careers. New Jersey's new initiative is expected to emphasize personalized instruction and improve quality of instruction for academic gains for students (New Jersey Department of Education, 2005).

In an article, "Game-Based Learning: how to Delight and Instruct in the 21st Century," Foreman (2004) foretells the benefits of game-based learning for a generation of students who have

grown-up immersed in an information technology world in which they have learned by using commercial games. By highlighting the perspectives of leading thinkers in the game development field on the organization and structure of education, Foreman relates that our educational institutions are still organized around limitations of the last century. The "industrial classroom approach" does not mesh well with the way other aspects of the 21st century are organized and operate. One of the advantages of using game-based technology is that learners can be immersed in the game world that simulates how learning will be applied to solve actual problems in actual situations. The game world allows learners to interact and learn with other students and participate in solving a complex set of decisions. The game-based learning community corresponds to how the Internet has allowed us to interact and solve problems. Learners can experiment with different solutions, support their learning with visual cues in a multimedia environment, and become active participants in constructing an understanding of the relevance of a concept, theory, or skill.

Even though the US military has used simulations to educate for decades, USAF Captain Iversen (2001) discusses the need for the military to adapt its instructional strategies more to the characteristics of the current generation. A generation accustomed to entertaining itself with television, video games, and videos requires increased video, simulation, interactive games, and technological methods to engage learners and to emphasize the relevance of specific concepts. Iversen proffers that the current generation of learners might simply process information differently because of the technological enhanced experience of growing up in America.

An article in Education Week (2005) reports that there are recent efforts to relate, and gain more knowledge about the link between teachers' knowledge of content, instructional strategies, and the academic achievement of students. For instance, *Teachers for a New Era*, funded by the Carnegie Corporation, is a nationwide initiative designed to noticeably alter and link teacher education programs to effective teachers' instructional strategies, internships for teachers, and improved student outcomes. Discussions around the Gates Foundation supported activities in North Carolina call for the need for reflective practices among educators that lead to an examination of what happens in the classroom and how it affects the achievement of all students. Education should affect change in our society and interrupt the patterns of poverty and social injustice (Tatum, 1997).

With the continuous need for Americans to strive to be the best and the brightest, it seems apparent that it is time to look closely at the influences, and intricate links, between student-teacher relationships, theme-based curriculum, social environment, and instructional strategies used in the

classroom. There is sufficient research also to suggest that African American and Hispanic youth perform better in an environment in which a sense of personal control and respect is coupled with active participation in relevant activities in personalized learning communities. As declared in *Learning Between the Lines*, we know the answers, so what do we do now?

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Table 1. **Statistical Comparisons of Education and Venture Treatment Groups**

		READING	LANG.	SPELL	MATH
SOCIAL	SCIENCE				
STUDIES			ARTS		
Between Group					
Training	Mean	2.39	2.41	2.81	2.33
2.67	2.43				
	Stan. Dev.	.83	.85	1.04	.97
1.01	.93				
No Training	Mean	2.05	2.10	2.44	1.96
2.23	1.75				
	Stan. Dev.	.88	.77	1.49	.81
.97	.81				
	F _{1,143}	5.42*	5.07*	2.80*	5.47*
6.63**	20.33***				

Within Group

Pre-test	Mean	2.11	2.16	2.85	2.17
2.24	2.23				
	Stan. Dev.	.96	.99	1.08	1.06
.97	.90				
Post-test		2.26	2.29	2.66	2.18
2.50	2.17				
	Stan. Dev.	.86	.83	1.25	.93
1.02	.95				
	t-test	-1.81+	-1.68+	1.72+	.19
2.92**	.78				-

*P<.05; P<.01; p<.001

Some passages removed....

Possibly because the least experienced and effective teachers tend to teach minority and low-income students, these students in the United States still have the highest drop out rates, and they are underrepresented in entrepreneurial ventures, higher education, and numerous careers. Students who drop out of high school often become disengaged in middle school; their reactions highlight the complex social context in which learning occurs.

Instructional strategies employed in entrepreneurial and career programs can be examples of how to accentuate the relevance of specific academic content and to foster students' passion for exploration and lifelong learning.

MacDowell (1990) paints a bleak picture of the failure of inner city schools to provide high school graduates with sufficient skill sets for the workplace or higher education. Since students in low-income school districts are often faced with difficult day-to-day challenges, they tend to be focused on immediate returns rather than long-term gains. Counselors and other adults are often overburdened with hundreds of students to help.

In order to advance our American ideals and inspire all youth to be as productive and responsible, as possible, we must continue to identify specific instructional strategies that are directly related to improved academic achievement for students. The interrelated components identified in this analysis contribute to improved academic achievement for students. The effect on student achievement of increasing or removing one or more components on programs like the New Jersey intervention project is a source for further research.