Increasing Male Academic Achievement

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Abstract

The No Child Left Behind legislation has brought greater attention to the academic performance of American youth. Its emphasis on student achievement requires a closer analysis of assessment data by school districts. To address the findings, educators must seek strategies to remedy failing results. In a mid-Atlantic district of the Unites States, the failing of male students was manifested on the statewide assessment as follows: Of the thirty-five schools serving grades 9 through 12, thirty schools or 86% showed boys scoring lower than girls in reading, and twenty-one schools or 60% showed boys scoring lower than girls in mathematics.

Seeking a possible solution to the failing of the male students in the school district resulted in uncovering valuable research on how and why boys learn the way they do. These data also offer suggestions and strategies for educators and parents that will lead to greater academic success for male students. The proposed organizational solution was to apply for public charter school funding to establish an all-boys school, with an emphasis on athletics (an area of interest for boys). Athletics was to be the strategy for getting the boys hooked on academic rigor. The school was identified as the Capital City Collegiate Sports Academy (the academy).

Preparation for such an undertaking required background information on the following: (1) charter schools, (2) single-sex schools, (3) learning theories, (4) brain research, (5) curriculum and instruction innovation, and (6) the sports industry. Additionally, a school plan was developed in accordance with the public charter schools' organization guidelines. The academy school plan includes (1) a statement of need, (2) the population, (3) the mission statement, (4) the philosophy, (5) the school goals, (6) the curricular offerings, and (7) the governance structure.

The results of this proposed solution are futuristic. However, what has been discovered in the planning stages for the academy should prove invaluable in developing a sound research-based instructional program to meet the academic needs of male students. Moreover, the curricular approach should result in these male students' personal fulfillment as productive, contributing members of society.

Introduction

Saying that we do not need to understand the brain to be able to teach it, is like saying a physician need not understand the body in order to treat it.

Patricia Wolfe[1]

The No Child Left Behind (NCLB) Act of 2001, United States federal legislation signed into law January 8, 2002, has as its primary goal improving the academic performance of U.S. school-age children. The intent of the legislation is laudable; however, its implementation procedures and effect on the academic achievement of students is a topic of great discussion and concern among educators and legislators across the country. NCLB supports a heavy emphasis on reading and mathematics skill development as its means of fostering and measuring academic achievement. While these curricular areas are fundamental to academic success, the instructional delivery appears to be neither challenging nor engaging, particularly among male students. Test scores of boys consistently have been significantly lower than those of girls, as measured by the standardized achievement instrument administered to high school students in grades 9 through 12 in an urban school district in the mid-Atlantic region of the United States (see table 1).

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[1]Patricia Wolfe, 2001, *Brain matters: Translating research into classroom practice* (Alexandria, Va.: Association for Supervision and Curriculum Development, 2001), vi.

It is fair to note that the NCLB legislation did not dictate pedagogy or organizational structure. However, its narrow subject matter focus on reading and mathematics tends to create a dilemma for administrators and teachers whose professional careers are tied to the students' success in these two subject matter areas.

As a result, it appears that limited attention is given to innovation and creativity in the delivery of instruction, whereas heavy emphasis is placed upon teaching to the test, rote memory, and skill and drill. Disciplines that speak a universal language and contribute to the mental and physical well-being of humankind, such as the arts, health, and physical education, are often displaced by more reading and mathematics instruction.

Herein lies the crux of the problem. In the face of significant educational flaws related to content offerings and instructional delivery, as evidenced by the test data, girls are still achieving more effectively than boys academically in this urban school district. Those data reported on thirty-five schools serving grades 9 through 12 show that for the 2007 school year, in thirty of the thirty-five schools (86%), girls scored higher than boys in reading. In mathematics, girls scored higher than boys in twenty-one of the thirty-five schools (60%).

Employment in this region primarily depends upon academic skill levels commensurate with white-collar jobs in governmental and corporate entities. In the service industry and for factory workers, where manual skills are required, employment is limited and inconsistent with the high cost of living in this demographic area. Therefore, to maintain a viable work force that can contribute to the economy and general wholesomeness of society, it is imperative that the lack of academic achievement, particularly among these male students, become of paramount concern among regional educators. To this end, a proposed plan of action was undertaken. An application for a grant would be submitted to the Board of Public Charter Schools to establish the All Boys Capital City Collegiate Sports Academy (the academy), an open-enrollment, all-male, uniform school for students in grades 9 through 12. A charter school was the selected schooling method to eliminate socioeconomic factors as a barrier to enrollment.

History and Overview of Charter Schools

The charter school movement has its roots in other reform models, such as alternative schools, site-based management, magnet schools, public school choice, privatization, and community-controlled schools. The term *charter* seems to have been used in the 1970s to identify New England school educators who had been given control, or a charter, to tackle the education crisis immediately. The American Federation of Teachers' president endorsed the idea. Philadelphia followed with a school-within-a-school concept known as charters.

In 1991 and 1992, respectively, charter school laws were passed in Minnesota and California. Nineteen states had supported the creation of charter schools by 1995, and forty states, plus the District of Columbia and Puerto Rico, had done so by 2003. Charter schools have been hailed as the fastest growing educational innovation.[2]

Charter schools are nonsectarian public schools of choice that operate with freedom from many of the regulations that apply to traditional public schools. The charter establishes each school as its performance contract. The charter/contract details the school's mission, program, goals, students to be served, method of assessment, and how it is to be measured to determine whether the school has been successful in doing what it set out to do. Most charter schools are authorized to operate for three to five years and thereafter seek renewal of the contract based on

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[2]WestEd, "History of Charter Schools," US Charter Schools, http://www.uscharterschools.org/pub/ uscs_docs/o/history.htm (accessed January 19, 2008).

performance in meeting the specified goals. Charter schools are accountable to their sponsor (state or local board of education). In return for this accountability in performance, charter schools experience increased autonomy. In general, charter schools are accountable to these groups: the sponsor, parents, and public. The schools must give an accounting of academic results and fiscal management. Today, charter schools serve more than one million students in more than thirty-five hundred schools.

Charter schools were established for these benefits:
1. Increasing opportunities for learning and access to quality education for all
2. Providing innovation in testing
3. Offering new professional opportunities for teachers
4. Increasing parental involvement
5. Improving public education
6. Helping educators realize their vision
7. Gaining autonomy
8. Serving special populations

Education is a state function; however, the federal government, represented by the U.S. Department of Education, establishes, administers, and coordinates federal assistance in education. Thus, there is a coordinated link between charter schools and the federal government.

History and Overview of Single-Sex Schools

The first public school founded in the United States in 1635 was the all-boys Boston Latin School. Shortly thereafter, the first U.S. public schools were opened with all-boys populations. Girls who attended schools were also in single-sex settings. However, girls' schools did not necessarily have an academic focus. The education females attained was to address the needs of males—imparting the social graces and learning to rear intelligent, knowledgeable sons. In the main, formal schools were reserved for the well-to-do.

After the Revolutionary War, schools became a concern because of the need for educated males to become leaders in the new republic. However, due to lack of funding and for political reasons, mixed classes were established against the better judgment of white middle- and upper-class parents. Coeducational schools began during the mid to late eighteen hundreds, and they persist today. By the close of the nineteenth century, only 12 of the 628 American public school districts reported having single-sex schools. As is the case today, private and parochial schools operate the greater portion of the nation's single-sex schools. During the twentieth century, the women's movement also contributed to the decline of single-sex schools.

In the latter part of the twentieth and the beginning of the twenty-first century, there has been a revival of the single-sex education movement. The revival has met with social and legal challenges; however, the challenges have been rebuffed in favor of students' reaching their fullest academic, social, and personal potential.[3] Some proponents believe that single-sex schooling is an answer to some of the academic and social problems confronting parents and educators.

Single-sex education has been given more consideration, because of the educational reform movement. In particular, the focus has been on whether there is equitable treatment of the sexes when they are taught in a coeducational setting. Haag cited several research findings, including these:

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[3]*Encyclopedia of American History,* s.v. "Single-Sex School," http://www.answers.com/topic/single-sex-school (accessed July 13, 2008).

1. Self-esteem for girls is higher in single sex-schools, while boys are more negatively affected by the female teachers than by the sex of their classmates.
2. Attitudes toward academic subject areas are affected by single-sex schools. Girls show stronger preference for mathematics and science in single-sex schools, and boys show stronger preference for music and art in single-sex schools than in coeducational schools.
3. African American and Hispanic American students attending Catholic secondary schools (both male and female) scored higher on standardized tests than their peers in mixed-sex schools; however, there is a greater emphasis on academics in single-sex schools than in the coeducational school settings.[4]

The decision to establish the academy as a single-sex school was based on research regarding these data: self-esteem, attitudes toward subject matter, teacher gender effect, and brain functioning. Each of these issues was considered in making the final decision. However, none was more compelling than findings on brain functioning. Academy proponents sought to understand how the male brain functions differently from that of the female. Proponents also sought understanding of other areas, such as self-esteem, gender and subject matter preference, and other learning conditions. The importance of these matters in choosing a single-sex school will be discussed elsewhere in this report.

Theoretical Framework

This study was undertaken to provide a sound research basis for launching this all-boys' school with athletics as its achievement strategy. Therefore, close attention had to be given to those learning theories that validate the organizational structure, curricular offerings, and pedagogy. The theoretical framework for this study embodies several congruent learning theories, namely, Lave's situated learning, Bandura's social learning, Vygotsky's social development, and Bruner's constructionist theories. To provide grounding in the framework's application to the study, an overview of each theory is provided below.

Situated Learning Theory

Situated learning theory, which Lave espoused in 1991, suggests that learning as it normally occurs is a function of the activity, context, and culture in which it occurs.[5] Thus, situated learning theory contrasts with most of what is viewed in the normal classroom of today, which involves an emphasis on abstract and noncontextual knowledge acquisition. While social interaction is a critical component of situated learning, this theory has been developed further by other researchers who emphasize the idea of cognitive apprenticeship. The concept of cognitive apprenticeship supports learning in a domain by enabling students to acquire, develop, and use cognitive tools in authentic domain activity. The cognitive apprenticeship idea expressed by Brown, Collins, and Duguid advances the concept of learning as a collaborative social interaction that takes place both inside and outside school settings.[6] The major principles

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[4]Pamela Haag, "K-12 Single-Sex Education: What Does the Research Say?" ERIC Digest, http://www.ericdigests.org/2001-2/sex.html (accessed January 19, 2008).

[5]Greg Kearsley, "Situated Learning," Theory into Practice (TIP) Database, *Encyclopedia of Psychology,* http://tip.psychology.org/lave.html (accessed January 19, 2008).

[6]John Seely Brown, Allan Collins, and Paul Duguid, "Situated Cognition and the Culture of Learning," *Educational Researcher,* 18 (January–February 1989): 32–42.

undergirding the theory of situated learning are (1) knowledge needs to be presented in an authentic context, and (2) learning requires social interaction and collaboration.

Social Learning Theory

The social learning theory, which Bandura proposed in 1997, emphasizes the importance of observing and modeling as effective skills for learning.[7] This theory posited that the behaviors, attitudes, and emotional reactions of others inform one of how to perform new behaviors. Social learning theory is a continuous reciprocal interaction among cognitive, behavioral, and environmental influences.

The role of social learning is also related to Lave's studies on situated learning. Bandura also explored the social learning theory and its applicability to training programs, where behavior modeling becomes a necessary byproduct. Self-efficacy, as defined by Bandura, is the belief in one's own capacity to organize and implement actions necessary to achieve desired outcomes. Thus, self-efficacy is important to grasping the fundamental outcomes set forth as standards of social learning theory.

These are essential principles of social learning theory:

1. The highest level of observational learning is achieved by first organizing and rehearsing the model behavior symbolically and then enacting it overtly. Coding modeled behavior into words, labels, or images results in better retention than simply observing.
2. Individuals are more likely to adopt a modeled behavior if it results in outcomes they value.
3. Individuals are more likely to adopt modeled behavior if the model is similar to the observer and has admired status and the behavior has functional values.[8]

Bandura's work, which focuses on self-efficacy, an aspect of Bandura's social learning theory, affects behavior and cognition. It affects learners in four areas: (1) their tendencies to approach or avoid learning tasks, (2) their efforts and persistence, (3) their thoughts during learning experiences, and (4) their persistence in learning activity.

When there are positive views of self-efficacy, students' approach to learning demonstrates determination even in the face of great challenge and belief that they will be successful. Alternatively, one who is low in self-efficacy tends to shy away from learning activities, gives up easily, and focuses on failure. Educators' performance in the classroom affords them the opportunity to contribute to positive self-efficacy through both verbal and nonverbal language.[9]

Social Development Theory

Vygotsky's theory of social development stressed the role of social interaction in the development of cognition. He contended, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to

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[7]Albert Bandura, "Personal Efficacy in Psychological Functioning," ed. G. V. Caprara (Beverly Hills, Calif.: Sage Publications, 1997).

[8]Greg Kearsley, "Social Learning Theory," Theory into Practice (TIP) Database, *Encyclopedia of Psychology,* http://tip.psychology.org/bandura.html (accessed January 19, 2008).

[9]Paul Eggen and Don Kauchak, *Educational Psychology: Classroom Connections* (New York: Merrill, Macmillian College Publishing, 1994), 435.

voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationship between individuals."[10]

Secondly, Vygotsky introduced the concept known as the *zone of proximal development,* a stage at which children engage in social behavior and at which point the potential for cognitive development depends. His view is that the range of skills that can be developed with person-to-person collaboration exceeds those skills that can be developed alone. He, therefore, concluded that socialization is essential to learning.

Vygotsky's theory of social development is closely associated with the work of Bandura (social learning theory) and Lave (situated learning theory). Major principles of Vygotsky's work are that cognitive development is limited to a certain range at any given age, and full cognitive development requires social interaction.[11]

Constructivist Theory

Bruner's constructivist theoretical framework presented learning as an active process that allows learning to draw upon current and past knowledge to construct new concepts and ideas.[12] This theoretical framework is specifically directed toward instruction based on the study of cognition. Bruner posited that instruction should address four major aspects: predisposition toward learning, the structure of knowledge for learning accessibility, effective sequencing of materials, and the nature and pacing of rewards and punishment. Three major principles summarize Bruner's constructivist theory:

1. Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness)
2. Instruction must be structured so that it can be easily grasped by the student (spiral organization)
3. Instruction should be designed to facilitate extrapolation and/or fill in the gap (going beyond the information given)[13]

Summary

Each theoretical framework contributes to the specific phases of the study under investigation. *Situated learning theory* encompasses the belief that the male students will become successful learners, because the learning activities (athletics), context, and culture will be germane to an area of interest to them. Further, athletics is highly dependent upon observation and modeling, which is the premise upon which social learning theory is based. Moreover, it is believed that students' interest in athletics, which has as one of its core values the necessity for collaboration and teamwork, will transcend the sports interest and carry over into the academic arena. Thus, *social development theory* becomes consistent with the principle that full cognitive development requires social interaction.

Lastly, the primary goal of the project is to produce young men who are self-actualized, contributing members of society. To these ends, the curriculum chosen and the mode of instruction are critical. Therefore, the *constructivist theory* of learning is most appropriately

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[10]L. S. Vygotsky, *Mind in Society* (Cambridge, Mass.: Harvard University Press, 1978), 57.

[11]Greg Kearsley, "Social Development Theory," Theory into Practice (TIP) Database, *Encyclopedia of Psychology,* http://tip.psychology.org/vygotsky.html (accessed January 19, 2008).

[12]Jerome Bruner, *Toward a Theory of Instruction* (New York: Norton, 1966), 72.

[13]Greg Kearsley, "Constructivist Theory," Theory into Practice (TIP) Database, *Encyclopedia of Psychology,* http://tip.psychology.org/bruner.html (accessed January 19, 2008).

chosen as the underpinning for instruction. Students will have opportunities to draw upon current and past knowledge and experiences, to relate these skills and experiences to familiar context, and to participate in active dialog with both teachers and peers. Such learning activities are intended to expand their intellectual capacities and potential for successful futures.

Literature Review

The All Boys Capital City Collegiate Sports Academy grew out of a need for an educational vehicle that would attract, retain, and educate young men who had not been academically successful in the traditional school setting. In many instances, these students were also lacking in basic social skills, because of economic deprivation. Educators frequently identify these problems but rarely have at their disposal the resources necessary to address them. Charter schools provide an avenue for success. Yet, for many public school educators, the charter school movement is seen as a threat, a put-down, or a competitor. The movement even causes feelings of guilt and abandonment. But, really, public charter schools provide for all children the potential opportunities afforded those families who are economically privileged and politically connected. The academy has several successful forerunners in the region. None, however, is publicly supported, nor are their populations underachievers. Thus, this venture, founded on the research, is a bold step on behalf of male students. The data cited below challenge educators to use their collective energies and resources to correct these shameful conditions.

Signs of Miseducating the Male Student

In the Sadkers' 1994 book, *Failing at Fairness,* a chapter called "Miseducation of Boys" opens with this quote: "To all the world boys appear to be the favored gender, heir apparent to society's reward."[14] However, at the end of the chapter, quite a different picture is painted. The script has changed, and so have the statistics. The data presented in 1994 seem to mirror those of 2008. In summary, the data show:

- Boys receive lower report-card grades.
- Boys are far more likely to be grade repeaters.
- Boys suffer hyperactivity and stress nine times more frequently than girls.
- Boys are identified for special education more.
- Boys receive greater behavioral penalties.
- Boys comprise 70% of school suspensions.
- Boys are three times more likely to become alcohol and drug dependent.
- Boys commit suicide two to three times more frequently than girls.

Gurian and Stevens reported similar data in 2005, but their findings included the following:

- Boys are 80% of high school dropouts.
- Boys make up less than 44% of college populations.
- Boys, on average, are a year to a year and a half behind girls in reading and writing, according to the U.S. Department of Education.[15]

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[14]Myra Sadker and David Sadker, "Miseducation of Boys," in *Failing at Fairness: How Our Schools Cheat Girls* (New York: Touchstone, 1994), 197.

[15]Michael Gurian and Kathy Stevens, *The Minds of Boys: Saving Our Sons from Falling Behind in School and Life* (San Francisco: Jossey-Bass, 2005), 22.

Lessons from Brain Research

At the heart of this study is an attempt to shed light on how different the male student is as a learner and to propose ways that the "teachers" in his life can contribute to making the schooling journey an academically rewarding and life-changing experience. Educators who are knowledgeable about the research on how students learn and how their learning preferences are related to the way their brains are wired will be better equipped to individualize their teaching styles to meet the learning styles of their students. Fundamental to an effective teaching and learning process is understanding the physiological structure of the brain. The following exploration of the mind of the male student will focus on that goal.

The past three decades of study have provided increasing knowledge about the brain and its functions, as well as how these functions are performed differently in males and females. The collaboration among neuroscientists, cognitive scientists, and educators is a welcome endeavor, because this cross-fertilization is essential as a foundation upon which educators can make decisions about the most effective approaches to use in the delivery of instruction.[16]

The brain is a complex organ that controls body functions. These are brain's three major layers: the cerebral cortex, limbic system, and the brain stem. The brain stem is the most primitive part of the brain; it is essential for survival. The limbic system is where emotion is processed through the amygdala, located just above the brain stem. The cerebral cortex is at the top of the brain, where thinking occurs. It is divided into several parts:

- Prefrontal cortex for moral and other decision making
- Right hemisphere for verbal skills: speaking, reading, and writing
- Left hemisphere for spatial skills: measuring, directions, and building

In view of these brain areas, how are the brains of boys and girls different in development and structure, chemistry and hormones, and function?

Development and Structure
- Girls' brains develop earlier and faster than boys.
- Girls take in more sensory data than boys; on average, girls hear better, smell better, and feel touch with more sensitivity than boys.
- Girls are better at controlling emotions than boys.
- Girls are less likely to take moral risks.
- Boys are more likely to be aggressive.
- Boys rely heavily on nonverbal communication.
- Girls rely heavily on verbal communication.
- Boys have more developed spatial abilities: measuring, design, geography, and map reading.

Chemical and Hormonal
- Boys' brains secrete less of the chemical serotonin than girls' brains, making boys more impulsive and fidgety.
- Girls' brains are more constantly stimulated with the chemical oxytocin, which makes them more sympathetic to others' pain and needs than boys.
- Girls' growth and body hormone is progesterone. Because the level varies from time to time based upon circumstances, females have mood swings.

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[16]Wolfe, *Brain Matters.*

- Boy's growth hormone is testosterone. Based upon its flow, males vacillate between aggressive and passive moods.
- Girls perform better on standardized and classroom exams when their estrogen level is high.
- Boys perform better on spatial exams when their testosterone level is high.

Functional
- Boys use the right hemisphere of the brain more.
- Girls use the left hemisphere of the brain more.
- Girls demonstrate greater function in memory and sensory intake.
- Boys demonstrate greater function in spatial relationships.
- Girls react more quickly to pain and endure pain more readily than boys.[17]

Gurian and Stevens portrayed the status of educational systems today as "breaking at the ribs just enough to leave the heart of education unprotected. That 'heart' is success for all children."[18] Their twenty years of research in the field of education, particularly as it relates to its effect on boys, suggests that specific attention should be given to four elements in restructuring America's educational systems: (1) male learning styles, (2) parental and community roles in the education of males, (3) the relationship between learning styles and educational practices, and (4) what works (methods, strategies, and techniques) in successfully educating males.

Learning Styles

In the mind's eye, the most prominent image of boys is rumpus—jumping, climbing, exploring. But does this image really have anything to do with how boys learn? Is there actually a difference in the learning styles of boys and girls? Or do all children learn the same? Is the brain a blank slate until it is affected by culture?

Authors working in the area of gender differences have found that here *is* a difference in how boys learn. This difference is the result of the structural and functional differences between the brains of boys and girls. Because of these differences, teaching styles must be altered if the male student is to be successful academically. Therefore, those engaged with boys in teaching-learning experiences should be aware of the following:

1. Boys tend to learn less well in sedentary positions.
2. Boys perform better intellectually through physical movement.
3. Boys are less successful at multitasking.
4. Boys need more sensory-tactile experiences.
5. Boys need more time to memorize, and they memorize best when information is organized in a listed format.
6. Boys are more impulsive decision makers.
7. Boys experience more "rest states" between tasks, which may contribute to incomplete assignments.

In view of these data, how should educators proceed? Boys do not live in a vacuum, and they do not just learn at school. Opportunities to learn are everywhere and at all times. It will take the whole village to educate young men successfully: parents, community, and teachers.

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[17]Michael Gurian and Arlette C. Ballew, *The Boys and Girls Learn Differently Action Guide for Teachers* (San Francisco: Jossey-Bass, 2003), 8–12.
[18]Gurian and Stevens, *The Minds of Boys,* 9.

Parent and Community Roles

Today's societal changes require revised and redesigned roles for parent groups, schools, and communities. These entities, of necessity, are interdependent; they must become more collaborative and supportive in their efforts to improve American educational systems. The nuclear family is a vanishing phenomenon. Contributing factors are industrial mobility, the demise of the traditional family, high divorce rates, teenage parenting, and high teacher turnover.

For lasting results, the coming together of parents, school personnel, and community representatives must be more than a listing of volunteers prominently displayed on a school's front-hallway bulletin board as a coalition. These groups must unite in support of male students. This coalition of stakeholders should be known to these students as persons who contribute to their well-being, both inside and outside the school. Boys must be able to speak about tangible and intangible "gifts" that these persons have deposited in their lives. Through awareness and training sessions on male differences and team building, individuals on a team will become more effective in their relationships among each other and in their interactions and bonding experiences with male students. Team members have the awesome responsibility and rewarding experience of knowing that they help to keep boys from falling behind in school and life.

The ten strategies to promote attachment listed below in an abbreviated and modified form are extracted from the work of Gurian, Stevens, and Crum.[19] While those authors propose that these strategies should be used early in a child's life, these strategies are included here, with more advanced descriptions, because attachment is vital to young men as they confront the challenges of life. In addition, it is likely that the failures of the male population of the academy could be attributed to the fact that they may not have experienced many of these strategies as they were maturing. So, if not then, why not now? These are attachment strategies:

1. Attention—showing a boy that he is worthy of one's time
2. Affirmation—validating positives with words of praise or rewards
3. Verbal repetition—acknowledging that one is listening and seeking clarity
4. Playful interaction—expressing care and intimacy
5. Leadership—acknowledging confidence and dependence
6. Enthusiasm—generating joy, pleasure, and encouragement
7. Predictability—establishing accountability
8. Self-management—participating in age-, time-, and place-appropriate behavior
9. Choice making—developing independence and decision making
10. Appropriate discipline—administering as corrective rather than punitive

Learning Styles, Educational Practices, and Strategies

In earlier sections on learning styles, attention was given to finding out how boys learn and why, based upon brain research. In this section, educational practices and teaching strategies are suggested to assist both professionals and lay members of the family and community as they support the male student in meeting success in school and life. Suggestions include the following:

1. Rearrange furniture to provide more mobility within structure
2. Emphasize the kinesthetic and physical approach to subject matter
3. Invite guest presenters in all disciplines to generate Socratic discourse

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[19]Ibid., 76–78; Pat Crum, director and trainer-consultant at the Family Nurturing Center of Michigan, may be reached at pat.crumb@spectrum-health.org.

4. Integrate the arts and athletics
5. Use physical movement during writing and reading
6. Use interviews as a learning strategy
7. Make learning relevant to students' lives
8. Connect athletics to mathematics and other related subject matter
9. Teach the game of chess to expand critical thinking and logic
10. Formulate olympics of the mind teams[20]

The Plan: The All Boys Capital City Collegiate Sports Academy

Background

To address the problem of low academic performance of male students, an alternative school setting was proposed.[21] Athletics was chosen as its curricular focus, because athletics is an area of significant interest among the adolescent male population of the targeted region. It was determined that through the medium of athletics, academic skills in reading and mathematics would be developed. The belief is that the boys will be motivated and challenged to acquire these academic skills, because athletics is an area of interest to them. Curricular offerings in the sports industry have the potential to develop young men who are academically and socially prepared to become contributing members of society.

Therefore, in preparation for the transformation, the first thought was visual appeal. The school was to become a uniform school for boys, known as the All Boys Capital City Collegiate Sports Academy. However, such an undertaking could not be accomplished without learning much more about the population to be served, the curriculum to be taught, and how and under what conditions might the goal of improving the academic achievement of these male students be achieved.

To become a member of the public charter school movement is no small feat. A stringent application process is required, which has become more competitive because of the increasing numbers of schools in the region that are not meeting annual yearly progress (AYP) standards, as required by the U.S. Department of Education. As a result, more citizen groups are petitioning for charter schools to provide parents options for their children, because parents have a right to transfer their children to public schools where AYP has been met or to a charter school.

Planning for a successful academy required examining several major program issues, including educational need, funding, population, mission, philosophy, curriculum, goals, governance, faculty, and facility. The major challenges in winning a charter school grant are the ability to establish a research-based need for the school and to design a cogent educational plan to meet that need within the guidelines of the charter school movement.

Statement of Educational Need

The academic achievement of male adolescent students in grades 9 through 12 is significantly lower than female adolescent students in the same grades, as measured by the

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[20]Gurian and Stevens, *The Minds of Boys,* 166–73, 176, 181–83, 185–91.

[21]The founding group is the body that works together to apply for a charter, 2202 (1) D.C. School Reform Act; New York Charter School Resource Center, "Establishing a Founders Team," *New York Charter School 2003 Resource Guide* (New York: New York Charter School Resource Center, 2003); Joyce Ley, "Core Founding Group and Accessing Experts," *Charter Starters: Leadership Training Workbook 1: Start-Up Logistics* (Portland, Ore.: Northwest Regional Educational Laboratory, 1999), http://www.nwrel.org/charter/Workbook.csworkbook1.pdf.

standardized tests administered by this mid-Atlantic school district. The district uses these tests to measure schools' AYP, as required by the NCLB Act (see table 1). While research has shown that male students require a different educational approach, as evidenced by studies of the male brain, there are limited educational institutions applying these findings to the daily teaching-learning enterprise for the academic success of students.

Lack of academic achievement among this male population can have an overwhelmingly disastrous effect on their lives and that of their offspring. They reside in a geographic area where 84.3% of the population has attained a high school diploma or higher, and 45.9% possess a bachelor's degree or higher.[22] The median household income is $51,847. The job market is predominantly geared toward government careers and professional fields. Therefore, gainful employment is necessary for economic stability. Nonetheless, self-actualization and meaningful lifelong engagement are also vital to a fulfilling life. Thus, the previously stated factors demand a different approach to addressing the academic achievement needs of the adolescent male school-age population in the region. The academy purports to be the answer.

Population

The academy is a secondary, open-enrollment school for male students in grades 9 through 12. During its first year, the academy will enroll 300 students and projects a maximum of 600 students for its full complement of students in grades 9 through 12 in 2013.

Mission Statement

The mission of the academy is to prepare male students in grades 9 through 12 to complete high school and college successfully, by providing a superior academic program and fostering a unique and robust curriculum designed to explore all aspects of the sports industry; to complement all learning styles; and to make learning experiences lifelong and meaningful.

Philosophy

The core beliefs and values of the academy are deeply rooted in the principles of exemplary leadership, high-quality teaching, outstanding student commitment and dedication, and parental/community empowerment for students to excel academically and in life. The academy embraces high academics and personal expectations for all students as each student fulfills his individual potential. The academy, an aesthetically pleasing and academically stimulating educational environment, is distinguished by its impeccably well-groomed young men, who have been rigorously instructed, purposefully challenged, and nurtured, so that they may mature as self-actualized, caring, and contributing members of society.

School Goals

The goals of the school are established in accordance with current data on the identified population and cumulative data on the general population of the school district. The academy goals are as follows:

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[22]U.S. Census Bureau, District of Columbia 2006 American Community Survey Data Profile Highlights, Fact Sheet, American FactFinder, http://factfinder.census.gov/servlet/ACSSAFFFacts?_event=Search&geo_id= 01000US&_geoContext=01000US&_street=&_county=&_cityTown=&_state=04000US11&_zip=&_lang=en& _sse=on&ActiveGeoDiv=geoSelect&_useEV=&pctxt=fph&pgsl=010&_submenuId=factsheet_1&ds_name= ACS_2006_SAFF&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry= (accessed June 28, 2008).

- To meet or exceed the state AYP average rates of proficiency in reading and math annually or achieve a minimum of 10% annual growth in the target content areas
- To have a 100% student promotion rate annually
- To have a safe and secure environment with 5% or less disciplinary action
- To have 90% daily attendance
- To have an annual attrition rate of 25% or less
- To meet proficiency in reading and math annually by 5%
- To increase student enrollment annually by a minimum of 100 students, starting with 300 students in grade 9 in year one
- To increase the number of college scholarships for graduating seniors annually by 10%
- To have a 100% graduation rate for all seniors
- To have 95% of all seniors attend college upon graduation
- To graduate its first class of seniors by 2013
- To increase parental and community involvement annually by 10%

Curricular Offerings

The curricular offerings of the academy comply with local and national standards and exceed the requirements regarding Carnegie units to be taken by ninth- through twelfth-grade students. The academy will use as its educational focus the field of sports to capture the attention of its male student population but realizes that ultimately the goal is to achieve significant improvement in the overall academic achievement of these students. To this end, the academy will use a collaborative approach to raising students' scores on traditional measures of academic achievement. Thus, America's Choice, a program that grew out of work by the National Center of Education and the Economy to support and develop standards and assessments, will be used to aid in a raising academic achievement. The program will hold students to high standards in the core subjects of English, language arts, mathematics, and sciences. The academy will institute a strong professional development program for teachers. The high standards will include proficiency in reading; mastery in algebra; the ability to write clearly and concisely at the conclusion of the tenth grade; and knowledge of biology, chemistry, and physics by the completion of the twelfth grade for graduation certification.

Consistent with the academy's philosophy, America's Choice school design centers on five areas: standards and assessment, learning environment, community service and support, high performance management, and public and parental engagement. The content and performance standards will be those of its public charter school district, which were adapted from the Massachusetts Learning Standards, which are highly regarded by several national organizations, including the Thomas B. Fordham Foundation, the American Federation of Teachers, and Achieve Inc. Such collaborative efforts have produced more challenging learning standards that specifically state what students should know and be able to do in each subject and at each grade level. With these standards, the stage has been set to provide an excellent, research-based educational experience, based on the uniqueness of the academy's approach to academic success for male students. Table 2 presents the program of study.

Governance Structure

The academy, in compliance with the Public Charter School Board, has a governing structure that consists of a founding group of five members and a seven-member advisory board.

The founding group members all have backgrounds in education and hold advanced degrees in diverse educational areas that are essential to launching the academy successfully. The founding group reports to the Public Charter School Board. The group is responsible for adhering to the charter, producing positive academic results, and sound fiscal management. Each group member holds a high regard for public school education yet acknowledges that not all students have benefited equitably from a public school education. Thus, group members determined that it was appropriate to use the charter school movement to explore a different academic venue to address the issue of the academic failing among adolescent males in this school district.

The members of the advisory board represent academy stakeholders. The board demonstrates a vested interest in the academy by providing oversight of school operations to ensure compliance with the charter agreement, securing external resources to enhance the academic and extracurricular program, and serving as a public relations and recruitment vehicle for the school.

Summary and Conclusions

The NCLB Act has had both positive and negative effects on schooling in the United States. Its narrow focus to document academic achievement has resulted in school districts' abandoning some of their disciplines that serve as motivators for school attendance and grade-point-average improvement. The act seemingly also challenges would-be creative teachers to become slaves to rote memory, skill and drill, and teaching to the test. On the other hand, NCLB has necessitated greater test analysis by school districts and schools. These analyses have resulted in improving professional development programs and personal development initiatives.

Alternative educational opportunities are available to parents because of the NCLB Act. To this end, the charter school alternative became the option of choice to implement the academy. To prepare effectively for establishing the academy, several steps were undertaken:

1. Researching the charter school movement and its implementation process for the geographic area where the academy was to be located
2. Studying the origin, strengths, and weaknesses of single-sex schools
3. Reviewing and selecting a learning theory or theories that were compatible with the school's mission and philosophy
4. Researching pertinent information regarding teaching and learning for male students
5. Collecting data and writing a charter proposal in accordance with the Public School Charter Board guidelines
6. Receiving approval of the plan

The results of the proposal are futuristic at this point. The work that has been done strongly suggests that much has been learned about male students through this process that will affect the way teachers relate to males in the school setting and how parents can aid the school by their involvement in the life of male children before their formal school experience. The result should be young men who are self-actualized and positive, contributing members of society.

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Table 1. Spring 2007 Achievement Gap in Reading and Math Proficiency by Gender

	Reading				Math			
School	Male (%)	Female (%)	Gap (%)	+M or F	Male (%)	Female (%)	Gap (%)	+M or F
1	6.80	5.77	1.03	M	6.80	3.85	2.95	M
2	9.20	22.22	12.42	F	9.80	4.76	5.04	M
3	3.91	8.80	4.89	F	5.47	9.60	4.13	F
4	86.36	96.55	10.19	F	95.45	89.85	5.60	M
5	34.12	38.66	4.54	F	45.88	34.45	11.43	M
6	16.49	18.56	2.07	F	25.77	24.74	1.03	M
7	11.65	17.17	5.22	F	13.59	21.21	7.62	F
8	14.00	36.59	22.59	F	14.00	31.71	17.71	F
9	68.58	76.60	8.02	F	73.56	73.96	0.40	F
10	22.76	25.76	8.00	F	20.30	19.70	0.06	M
11	…	…	…	…	…	…	…	…
12	13.73	30.56	16.83	F	22.55	22.22	0.33	M
13	60.78	66.29	5.31	F	43.14	50.56	7.42	F
14	30.53	42.24	11.89	F	29.47	39.39	9.92	F
15	24.92	15.04	9.78	M	18.44	16.81	1.63	M
16	59.84	74.85	15.01	F	50.82	63.80	12.98	F
17	10.32	21.34	11.02	F	8.73	13.04	4.31	F
18	16.80	25.22	8.42	F	15.20	21.74	6.54	F
19	28.99	41.92	12.63	F	39.05	44.10	5.05	F
20	5.80	5.83	0.03	F	7.97	5.00	2.97	M
21	10.00	27.64	17.44	F	10.20	16.08	5.88	F
22	12.27	17.36	5.09	F	17.79	12.50	5.29	M
23	17.50	24.77	7.27	F	20.00	17.43	2.57	M
24	15.44	25.45	10.01	F	14.71	19.09	4.37	F
25	69.41	68.03	1.38	M	65.88	50.82	15.06	M
26	4.55	17.65	13.01	F	5.45	9.80	4.35	F
27	31.58	32.60	1.02	F	15.79	21.74	5.95	M
28	17.46	21.74	4.28	F	11.90	12.17	0.27	F
29	21.95	14.29	7.66	M	31.71	20.41	1.13	M
30	73.53	97.06	23.53	F	82.35	85.30	2.95	F
31	13.64	26.42	12.78	F	23.86	28.30	4.44	M
32	16.18	15.38	0.08	M	13.97	15.38	1.41	F
33	15.25	23.91	8.66	F	16.95	19.57	2.62	F
34	57.14	65.85	8.71	F	48.35	40.98	7.37	M
35	53.03	61.08	8.05	F	49.49	51.89	2.40	F
36	8.24	13.95	5.71	F	9.41	11.63	2.22	F

Table 2. Program of Study

Subject	Credit
English I, II, III, IV	4.0
Algebra I, II	2.0
Geometry	1.0
Calculus	1.0
Biology	1.0
Chemistry	1.0
Physics	1.0
World languages (French, Spanish, Latin)	2.0
Health and physical education	1.0
U.S. government	0.5
World history	1.0
World geography	1.0
Local government and history	0.5
Music	0.5
Art	0.5
Athletic career seminars	
Sports management	0.5
Media relations	0.5
Sports medicine	0.5
Athletic training	0.5
Electives	4.5

Note: These extracurricular sports are also offered: basketball, football, hockey, lacrosse, track and field, tennis, baseball, soccer, skiing, and cross country. Each student is expected to participate in at least one sport. His participation is recognized by trophy, sports letter, or certificate, depending on his participation level.