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A study of the relationships between high school GPA and interpersonal adjustment, potential career focus, and study skills for high scorers on the Scholastic Assessment Test

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A STUDY OF THE RELATIONSHIPS BETWEEN HIGH SCHOOL GPA AND INTERPERSONAL ADJUSTMENT, POTENTIAL CAREER FOCUS, AND STUDY SKILLS FOR HIGH SCORERS ON THE SCHOLASTIC ASSESSMENT TEST

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A STUDY OF THE RELATIONSHIPS BETWEEN HIGH SCHOOL GPA AND INTERPERSONAL ADJUSTMENT, POTENTIAL CAREER FOCUS, AND STUDY SKILLS FOR HIGH SCORERS ON THE SCHOLASTIC ASSESSMENT TEST

by

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DEDICATION

This dissertation is dedicated to my husband, Jack, who inspired, pushed, scolded, helped, and sustained me in getting it done. Many thanks.

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Abstract

A STUDY OF THE RELATIONSHIPS BETWEEN HIGH SCHOOL GPA AND INTERPERSONAL ADJUSTMENT, POTENTIAL CAREER FOCUS, AND STUDY SKILLS FOR HIGH SCORERS ON THE SCHOLASTIC ASSESSMENT TEST

Student, Virginia A. Carey, Ed.D. the College of William and Mary in Virginia, 1997. 132 pages.
Chairperson: Professor Victoria A. Foster

The purpose of this study was to assess the level of correlation between the high school gpa's of high scorers on the SAT and three variables: degree of career focus, level of study skills knowledge and use, and quality of interpersonal relationships. It was hoped that correlations might suggest positive intervention strategies for gifted high school students who are underachieving in high school in order to improve their high school to college transitions.

The researcher worked with school personnel in 20 high schools in the southeastern region of Virginia. High SAT scorers were identified and they were provided with three survey instruments to be completed at home: a degree of career focus scale, the LASSI (Learning and Study Skills Inventory), and the AIR (Assessment of Interpersonal Relations) Scale. Best SAT I scores were collected as well as seventh semester gpa's and correlated against the three survey measures.

It was hypothesized that among these high SAT scorers, gpa would correlate positively with a higher degree of career focus, with a higher level of study skills, and with higher ratings of interpersonal relationships with parents, peers, and teachers.

Statistical analyses revealed significant correlations between SAT and gpa, gpa and the motivation subscale of the LASSI, and gpa and the global score on the AIR as well as the AIR subscales for relationships with father and female peers. Math and total SAT scores also correlated positively with the Test Taking Strategics subscale of the LASSI.

It was concluded that study skills motivation may be a factor in academic underachievement among bright high school students, but that degree of career focus alone was not a good predictor of motivation. It was also concluded that family and peer relationships had an influence on gpa for the research sample, and that SAT scores correlate positively with high school gpa even among a relatively high scoring group.

Further research is needed to discern additional factors which cause, or at least predict, underachievement among gifted students and to assess how these findings and previous research and theorizing may contribut to intervention strategies.

A STUDY OF THE RELATIONSHIPS BETWEEN HIGH SCHOOL GPA AND INTERPERSONAL ADJUSTMENT, POTENTIAL CAREER FOCUS, AND STUDY SKILLS FOR HIGH SCORERS ON THE SCHOLASTIC ASSESSMENT TEST

CHAPTER 1

Introduction

Statement of the Problem

This research study investigated the statistical relationships between high school gpa and three other variables for senior high school students who scored within the top decile nationally on the Scholastic Assessment Test (SAT I) of the Educational Testing Service. The specific relationships to be studied are

(1) gpa and overall personal adjustment as measured by the Assessment of Interpersonal Relationships (AIR, PRO-ED Publishers, 1993)

(2) gpa and level of potential career focus as measured by the "My Vocational Situation" questionnaire developed by Holland, Daiger, and Powell (Consulting Psychologists Press, Inc, 1980)

(3) gpa and study skills attitudes and acquisition as measured by the Learning and Study Strategies Inventory (LASSI, H&H Publishing Co, 1990)

Justification for Study

Significant bodies of research exist relevant to both the terms "giftedness" and "underachievement" despite the difficulties and lack of consensus about an exact definition for either concept. However, relatively few researchers have chosen to study specifically the phenomenon of underachievement among high academic ability students. Notable exceptions include Whitmore, Rimm, Redding, Cornell, and others cited in the Review of Literature. Much of the thought and study by these researchers, however, has been qualitative rather than empirical. This study was carried out to provide quantitative underpinning for some current thought about dealing with underachievement among a specific population: high academic ability adolescents in the transition from high school to college.

Bright high school underachievers have always presented special challenges and frustrations for parents, teachers, guidance counselors, and college admission personnel as well as other "helping" professionals. College attendance immediately--or nearly immediately--after high school is generally seen as the desirable goal for adolescents

demonstrating high academic/intellectual potential, even if that potential has not resulted in "good grades," the traditional measure of academic achievement. Numerous studies, including those by the College Board and Educational Testing Service, verify over and over that academic performance in high school is the best predictor of academic performance in college, though other factors such as standardized testing, motivation, personal and financial security, and career focus contribute to predictive ability about ultimate successful completion of a degree. As a consequence, high SAT scorers with poor high school grades are often seen as unattractive risks in selective college admission processes. Appendix A provides an actual high school transcript and testing data for an applicant rejected by two very selective colleges in Virginia within recent years. High ability applicants with low grades are typically not admitted by selective colleges; no special support efforts are made by colleges that admit bright underachievers; and little effort is made to document academic progress or success rates for high ability/low achieving "admits."

As is discussed in the Chapter 2 review of the

literature, there are many hypotheses about the possible causes of underachievement by students of high academic ability. Explanatory approaches run the gamut from developmental difficulties, to personality syndromes, to family dynamics theories, to ineffective learning behaviors. Whitmore (1980) contends that the most productive amelioration model views traditional educational systems, rather than any constellation of attributes among individual bright students, as the root of the high ability/low achievement problem, and therefore what needs to be fixed.

Whatever individual or multiple factor theory of high ability/low achievement causation appeals to an individual educator or counseling professional, the use of an intervention effort by high schools or colleges may be justified to (1) minimize admission risks (i.e., reduce the possibility that admission spots are given to potentially successful candidates who will not actually succeed rather than to students whose academic success is statistically more likely); and (2) assist high ability/low achieving high schoolers in a successful transition to higher education.

A "conditional" college admission offer (i.e., one contingent on successful participation in an intervention program) might offer a service both to the high ability

underachieving student and the institution, allowing for greater fulfillment of the personal and intellectual potential of a bright but unfocused or unmotivated young person.

Such an intervention, whether short-term (summer transition program prior to first year) or long term (high school years through college career) should be established based on developmental theory: a cognitive-behavioral counseling approach (such as Lazaras' Multi-Modal) which allows various techniques for resolution of varying problems, and also current hypotheses and practices in working with high ability/low achievers. However, the study of additional quantitative data relevant to the relationships between academic performance (high school gpa) and several hypothesized causes of underachievement among high ability students should guide the construction and implementation of any intervention project.

The justification for this specific study was to lay the groundwork for assessing which of several variables addressed in previous studies seemed to affect academic performance (gpa) among high SAT scorers in order to suggest a potential framework for the design and planning of such intervention programs in the high school to college

transition process. It was hoped a side benefit might also be that high school counselors and college admission personnel, working together, might define other ways of assessing the potential for successful college careers beyond the traditional "currency" of grades in high school.

While a great deal of qualitative work and thinking about the causes of low achievement among high ability students has been accomplished, few empirical studies have attempted to verify hypothesized causes or outcomes of helping practices. This study has been an attempt to do so by looking at achievement differences among high ability adolescents, rather than working backward to presumed causes among high ability individuals who have been identified--or labeled--as "underachieving."

Theoretical Rationale

The theoretical rationale for this study must be considered two-pronged: a theoretical rationale for definition of the problem and a theoretical rationale for possible solutions. The two are related and overlapping, but not identical.

Theoretical Framework for Definition of Problem

As cited above, and as explored in Chapter 2, numerous isolated "studies" have been done, and ideas advanced, concerning possible causes of underachievement among high ability children. However, Joanne Rand Whitmore must be considered the leading researcher and theorist--perhaps the leading "believer" in--"gifted underachievement" as a phenomenon apart from both giftedness and underachievement. Surveys of relevant studies by such authors as Janos and Robinson (1986) and Thomas and Crescimbeni (1966) suggest that gifted students (typically defined as high IQ individuals) are as physically healthy, emotionally stable, popular, and positive as their peers, but that children with extremely high IQ's may be more susceptible to difficulties in the interpersonal realm which may lead to underachievement in traditional school settings. Whitmore builds her theory of gifted underachievement on this premise in her seminal work, *Giftedness, Conflict, and Underachievement* (1980). She is also the author of numerous other studies, as cited in the review of literature. Whitmore began her work on gifted underachievement with four goals in mind: (1) to create awareness of the extensive damage to individual young people--and to society--which can

occur when adequate educational opportunities are not provided gifted youngsters even in the early elementary grades; (2) to report evidence that early identification and intervention with appropriate educational programs for gifted children can prevent or reverse patterns of failure; (3) to increase public and professional support for programs for the gifted, including the provision of appropriate teacher preparation, and (4) to provoke interest in funding and research related to the educational needs and underachievement of gifted children.

Whitmore sees the development of gifted underachievement as the natural result of the conflict between the special psycho-social and cognitive developmental needs of high ability children and the rigidity, conformity, and rote memorization routines of the traditional classroom. She believes that partial, or even totally, alternative educational programs for exceptionally high ability youngsters are desirable, despite the current emphasis on mainstreaming in the special educational community, if underachievement problems are to be avoided, or corrected as soon as possible. From her 1980 perspective, Whitmore contends that educators and psychologists have spent too much time on side issues that

have detracted from more important goals of providing appropriate educational experiences for the gifted. She identifies these issues as common errors in methods of identification, and definitional problems about "giftedness," philosophical debates about whether giftedness is a function of nature or nurture, and concerns about the variability within the group of individuals classified as "gifted."

While significant progress has been made in the last decade relevant to mandated identification and support programs for gifted students in school systems across the country, high ability students still reach high school, and even high school graduation, without converting their intellectual ability into the traditional college entry currency of achievement (i.e., grades) in the classroom.

Whitmore tends to ascribe some of the personality characteristics and behavioral patterns she, and other researchers, associate with underachievement as <u>resulting</u> from the unsatisfactory school/student interaction. Other ideas about causality have been advanced, in some cases without benefit of any attempts at empirical verification. This study explores the relationships between hypotheses related to students' personal adjustment and learning skills

acquisition, as well as motivation based on potential career focus and the basic tenets of Whitmore's theory of causation.

Theoretical Framework for Possible Solutions

This study subscribes to Whitmore's previously cited contention that "identification and intervention with appropriate educational programs for gifted children can prevent or reverse patterns of failure;" however, while her emphasis is on early identification and intervention, this study assumes that useful interventions can, and should, occur even as late as the last years of high school, or the timeframe immediately prior to college entry.

The developmental theories of such giants as Perry, Kohlberg, Erickson, Super and Heath suggest that intellectual functioning, moral reasoning, positive self-concept, social interaction, and emotional maturity are ongoing processes that continue throughout the entire human life cycle and that even entrenched behavioral patterns established in childhood can be modified through the individual's own experience or effort as he/she interacts with the outside world.

Whitmore consistently contends that educational (specifically classroom) interventions can be effective, at

least with younger high ability students who are at risk of underachieving, and Rimm (1995) documents her "Trifocal" counseling intervention approach in working with high ability underachieving students of all ages. She claims that at her Family Achievement Clinic, counselor/educators are able to reverse patterns of underachievement in roughly four out of five students by using a three-pronged approach involving the child, the parents, and the school. The Clinic approach can be described as cognitive-behavioral because the intervention is based on identifying "problems," understanding causes and solutions, and learning new attitudes and behaviors while unlearning old, self-defeating ones. This study was conducted to add to their research base for structuring just such an intervention strategy for a specific target population.

Definition of Terms

Career Focus — For the purposes of this study, level of career focus has been assessed by students' responses to a likert-type questionnaire developed by Holland, Daigert, and Powell, and used by the William and Mary Career Services Office.

GPA — (Grade point average) The most universally recognized index of academic achievement at the high school or college level; seventh semester high school gpa's of high ability students are compared statistically to certain personality and skills characteristics of high ability students in this study.

"High Ability" — For the purpose of this study, high school students are identified as having high ability if they scored in the top decile of the national cohort of college-bound students taking the Scholastic Assessment Test (SAT I)

Low Achievement	(Also, "underachievement") A subjective term which can be defined stringently as failure to produce a gpa consistent with percentile equivalent of standardized ability testing. For this study, high ability students would then be considered to have "low achievement" if high school rank-in-class or gpa distribution position placed them below the 90th percentile of their senior class peers.
Personal Adjustment	Social comfort level. For this study, this variable has been measured by the AIR Assessment of Interpersonal Relations, Pro-Ed Publishing. Five separate scales assess relative positivism of relations between adolescents (age-normed) and mother, father, male peers, female peers, and teachers. A global score is also calculated statistically.

SAT I	The Scholastic Assessment Test of Educational Testing Service is a standardized test recognized internationally as a predictor of academic success (i.e., grades) in college.
Study Skills	The pattern of attitudes and habits identified by the LASSI, Learning and Study Strategies Inventory (H & H Publishing Co.) has been defined as constituting this concept for this study.

Research Hypotheses

The following research hypotheses were examined in this study of the relationships between high school gpa and personal adjustment, degree of potential career focus, and level of study skills development for high academic ability students, identified by high scores on the Scholastic Assessment Test (SAT 1).

(1) Among high testers, students showing higher levels of personal adjustment would tend to have achieved higher gpa's.

(2) Among high testers, students demonstrating a higher degree of potential career focus would tend to have higher gpa's.

(3) Among high testers, students demonstrating a higher level of knowledge about, and use of, effective study skills would tend to have achieved higher gpa's.

Sample Description and General Data Gathering Procedure

This study utilized a sample of high SAT I scores (top 10% nationally) from high schools in the lower Eastern corridor of Virginia (Richmond suburbs and Tidewater). All seniors identified by school personnel as having scored at

the required levels were invited to participate. The three instruments were mailed to potential participants (or hand delivered) by high school personnel during the spring semester after a seventh semester gpa had been calculated.

Student confidentiality was protected since only an identification number associated with verbal and math SAT scores and high school gpa was used to link variable data gathered to an individual gpa. In order to encourage the participation of as many as possible of the eligible students, a small monetary award was offered. Participants were encouraged to mail back a pre-stamped response card (Appendix E) separately from their response data with name, address, and indications about willingness to participate in future studies. On June 1 and again on June 15, a response card was randomly drawn from all the returns to date and two monetary prizes awarded: $100 and $50 respectively. The "honor system" was used with no attempt to match up returned response cards and returned data sets. High school personnel were asked to encourage broad-based participation across ethnic, SES, and academic achievement levels. Interested students, parents, and school personnel will also receive a synopsis of the results of the research project. Great care was, and will be taken, however, to

protect not only individual student/participant identities, but also school-division-specific data. However, data was associated by school division, within the confines of the research project only, for two reasons: (1) logistical purposes (coordinating "mailings" to students) and (2) the need for the researcher to be aware of general differences in gpa means and variability from one school division to another. No breakout interpretation of data by school division was planned or has been implemented, however.

Limitations of the Study

Given that the purpose of this study was to add to the research base for the construction of a high school-to-college-transition intervention for "at risk" high ability but underachieving adolescents, the limitations of the study fell into three categories: limitations related to the scope of the study; limitations related to the sample utilized; and limitations related to the measurement instruments used.

An effective senior year and/or summer intervention project for gifted underachievers might involve numerous components including a bibliotherapy approach for enhancing self concept and self-esteem, a career counseling program

with or without a mentorship experience to enhance motivation, a study skills enhancement curriculum, a peer group establishment/social skills development component, a health and general well being enhancement program, an orientation to college/campus life and support services, a community service component, etc. Many environmental, personality, and behavioral variables of high school students could be measured to try to establish what factors to be addressed by the intervention project seem to have the greatest effect on academic performance for highly capable students (as identified by the SAT I). The number of factors to be measured was held to three to simplify the statistical analysis; to contain the timeframe needed for "testing" so that the likelihood of greater numbers of participants could be enhanced; and to ensure the availability of appropriate measures. The three measures chosen seemed to provide the optimal combination of developmental, motivational, and learning measures which other theory and research suggests may have the biggest effect on academic performance. (See Chapter 2.)

A great deal of thought went into defining the sample population, but limitations did, nonetheless, effect the usefulness of this study. First, of course, it was not

possible to ensure inclusion of 100% of all students in the sample frame despite everyone's best efforts. Care was taken to attempt to assess any patterns of non-participation (gender, SES, ethnic group, achievement level) and all the implications of using a volunteer sample were considered. Second, the concept of using the SAT I to define a population referred to as "high ability" has some limitations in that controversy exists among educators and the general public relevant to alleged biases of any paper and pencil test which correlates with socio-economic status, reflects gender differences, etc. In addition, numerous studies on the predictive validity of SAT scores for freshman year grades show enhancements of only 14% to 19% over high school grades (already cited as the best predictor of college grades). However, the widespread use of the SAT I by colleges and universities to select their incoming classes each year, as well as to distinguish the level of scholastic promise or competence, lends credibility to its use in this study, focused as it was on successful high school to college transition. Failure to be admitted to college has to be perceived as an unsuccessful transition! Thirdly, it is possible that the range of gpa's available within the sample which ultimately participated were not

wide enough to show significant results. (See Results and Discussion sections.)

In addition to the limitations of each measurement instrument, which are discussed in Chapter 3, it must be noted that all of the instruments involved self-reporting rather than objective-outside-observer measurement. Self-reported information is sensitive to many well-documented effects including tendencies to provide the socially acceptable answer. However, an effort was made to diminish the impetus for doing so by the assurance of confidentiality, by the fact that participants had already been defined as being in the "high ability" population, and by the lack of cues that any one type of characteristic was to be perceived as "better" than any other.

CHAPTER 2

Review of the Literature

Theoretical and Historical Background

Although the target population of this research effort was specifically high *academic* ability adolescents (defined as high scorers on the SAT I), it is important to note that in much of the copious thinking, and the less extensive, research on high ability students who don't perform well on traditional measures, such as high school grades, the term "gifted" is used as synonymous with "high ability." As documented below, the term "gifted," while denoting some type of academic excellence in early research, is now interpreted much more broadly. However, the studies cited below have been selected as pertinent to the academic intelligence/ability definition relevant to this study.

For as long as parents and teachers have inhabited planet Earth and worried about children, the concept of the "gifted underachiever" or high ability/low achievement student has probably been with us. The idea of intelligence, scientifically measured, dates back not much further than the 20th century, and Terman's longitudinal studies (begun in the 1920's) of highly intelligent children moving into and through adulthood are the most commonly

known attempt to analyze how very intellectually capable human beings may differ in life experiences from their cohorts.

The concepts of "giftedness" and a "gifted and talented" population which has special characteristics, proclivities, and educational needs is a creation of educational systems within the past 30 years. It is only within the last 10 to 15 years that most school divisions have made efforts to provide specific curricula, resources, programming--and less frequently, counseling--to the "gifted" students in their populations, whom they struggle to appropriately and fairly identify. Subgroups within the gifted population are being identified, discussed, worried over, and researched: female versus male students, gifted students with learning or physical disabilities, and/or socio-economically disadvantaged families, and--less frequently--gifted or high academic ability students who get poor grades.

Just as the definition of "gifted" is tremendously difficult to pin down (reams of pages have been written on the subject), so the concept of underachievement among the gifted is equally fuzzy. In fact, some researchers such as Joanne Rand Whitmore (1980) suggest that the concept is

basically flawed: "underachievement," measured in traditional systems which do not value the special learning and accomplishing styles of very able students, doesn't really mean much. The standards, not the student, are the problem according to Whitmore.

For parents, teachers, college admission officers, and counselors of school age children--particularly adolescents--who cannot or will not perform in the classroom (even an enhanced classroom), the problem is real enough, however. Few children growing up in the U.S. today totally escape what may be seen as the tyranny of traditional grades as the passport to college, careers, and happy and fulfilling lives. Heath (1991) comes to some interesting conclusions in his longitudinal study of Haverford graduates over a 25 year span from their college years to middle age, *Fulfilling Lives*. In his search for the best predictors of success and satisfaction in personal relationships and professional careers, he concludes that emotional maturity, androgyny, community involvement, and optimism predict positive outcomes just as well as basic intelligence measures. Perhaps even more surprisingly, his work with his subjects suggests that there is actually a negative correlation between intelligence and "fulfilling lives" in

the absence of these other characteristics.

Because educators and counselors dealing with high ability adolescents who have become--or have been labeled--underachievers are dealing with an educational setting, an educational system, and traditional academic standards (grades) as well as family systems, it is important to have some background in the various ongoing dialogues about "giftedness" and educational services for the "high ability" student.

Identification, explored by Tuttle and Becker (1980) and Renzulli (1978), is certainly the biggest controversy with varying factions favoring to varying degrees: (1) high dependency on standard IQ measures, (2) use of anecdotal and subjective measures/evaluations by family, teachers, and even peers, (3) assuming specific percentages of a local population must be gifted and identifying them for special services, (4) limiting special services and resources to students who have demonstrated they will benefit from them. At least two of these four identification themes can mitigate against the inclusion of underachieving children in gifted programs because they may *not* be recommended by teachers nor seen as students who will benefit. Whitmore (1986, 1988), on the other hand, would

suggest that very capable underachievers are *most* in need of identification, and *most* needful and deserving of specialized education and help when resources are scarce. Although Whitmore's (1980) premise is that intervention must occur early to avoid the development of irreversible patterns of underachievement, this research effort was premised on the assumption that even high school and pre-college interventions may increase the chances for successful college careers.

Part of the confusion over identification results from the generally accepted premise that different types of giftedness exist, and that not all children/people gifted in one area are strong in the others. Khatena (1986) describes the six types of giftedness currently recognized by the U.S. Department of Education: general intelligence, creative or productive thinking, specific academic aptitude, leadership, visual and performing arts, and psychomotor ability. While underachievement could occur in any of these special areas, it is most commonly perceived in the first three and the SAT I is appropriately considered a measure of the first and third qualities. The classic high ability/low achiever might be the creative adolescent whose "productive" thinking doesn't fit the classroom definition of productivity, or the

very focused gifted individual (theater, music, computers) who is disinterested and practically oblivious to "productivity" in other areas. One of the common misperceptions about gifted students pointed out by Thomas and Crescimbeni (1966) and by Kaplan (1983) is that gifted kids are good at everything.

Despite the mandates for comprehensive gifted educational programming and services in many states including Virginia, not many school divisions are completely comfortable with their educational models for the gifted and talented. Should gifted education consist of massive acceleration of curricular content, pushing gifted students ahead of their peers in reading levels, math books, etc., or should it consist of enrichment activities at grade level, maintaining a consistent chronological sequence for all students? Thomas and Crescimbeni (1966) devote two chapters of their book to exploring how the needs of gifted students can be met through both types of activities. Clark (1979), Khatena (1986), Redding (1989), Rimm (1995), Schmitz and Galbraith (1983), Sternberg and Davidson (1985), and Whitmore (1980) among others, also address special educational needs, and efforts, for high ability students.

Parents often want to see gifted education as an

enhancement of "regular" education for an "elite." Educators like Whitmore, more concerned with the high ability underachiever than with gifted folks in general, view "gifted and talented" (G&T) programs as "special" education, mandated help for those not able to cope in regular classrooms, more similar to programs and resources for the "differently abled," such as learning disabled or emotionally disturbed students. Tied in with the conflict over regular or special education is the model of self-contained versus resource efforts. Again, Whitmore stresses that limited G&T resources should be applied to self-contained classrooms for underachieving gifted rather than "pullout" programs for highly able students in general. She also argues for early identification of gifted students to get the jump on underachievement before it hardens into an unbreakable pattern. On the other hand, a system that relies on early (primary grade) identification of a "gifted" group may leave out, perhaps forever, equally able children, particularly culturally different or socio-economically disadvantaged students, who are not precocious and have not been pushed academically at home. This latter identification predicament further defines the need for designing later adolescent/pre-college interventions for

high ability students who are underachieving.

Whitmore's *Giftedness, Conflict, and Under-Achievement,* (1980) is still considered the original "bible" for those who work with, or have a concern for, high ability underachievers. In addition to outlining intervention strategies for younger students, Whitmore's books pull together the insights of those few educators who have explored the realm of gifted underachievement as it has been recognized as a specific phenomenon within the last 30 years: Cupertino's "underachieving gifted program" of the sixties, Whitmore's own work, and the studies reviewed by Dowdall and Colangelo (1982). This latter extensive literature review (rather than meta-analysis) found only a few limited replication studies and almost nothing on success rates for interventions. Rather, they found and reviewed 13 research efforts with statistics and definitions for high ability underachievers.

Manaster and Powell (1983) explored the possible causes and ramifications of adolescent underachievement for high ability students in their article which defines three types of problem thinking and maladaption for such young people, primarily in developmental terms. According to Manaster and Powell, high ability adolescents do not experience *more*

problems with adolescence but they are more prone to certain kinds of problems. Appendix B, an application essay by a high-ability/low achieving William and Mary applicant who was not admitted, provides an insight into how this erratic developmental pattern "feels" to an adolescent.

Miller and Goldblatt (1989) talk about the "Hamlet Syndrome," referring to both men and women who are "overthinkers and underachievers." While not an empirical study, their book describes the developmental dilemmas of intellectual, high ability individuals during childhood, the college years, and in the "real world."

As described below, other theorists on the high ability/low achievement phenomenon have espoused various other "causes" for low achievement including family dynamics/constellation, intrinsic personality differences, and dysfunctional learning. Dysfunctional learning may be of two varieties: (1) maladaptive patterns of underachieving behavior for short term gains (Delisle, 1982) or (2) failures to learn such adaptive behaviors as good study skills (Kaplan, 1983).

Schools and families certainly see the underachievement of high ability students as a problem, but there is little evidence that colleges and universities have become

interested in the phenomenon. The review of literature for this research project turned up virtually nothing at the college level specifically directed to the underachievement of high ability matriculants. The one exception (Janos, 1986) dealt with gender differences in personality variables for underachieving, markedly accelerated college students. For precocious students who entered college early, underachieving males were less psychologically mature and had more internal conflict, while underachieving females evidenced greater/earlier maturity but conflict over femininity and achievement.

In addition, a unpublished survey of 60 colleges and universities conducted by the author of this proposal in 1988 found little interest in identifying and providing special interventions for high ability/low achievement applicants. The prevailing approaches used by colleges in dealing with high ability underachievers are to ignore them, either by refusing to admit them, or by failing to identify and serve/support them with specific interventions if they are admitted. Very selective colleges and universities take the former course and less selective institutions the latter. College failures to address high ability/low achievement students in admission and support policies can

be attributed to four basic premises: (1) the college's experience *is* "gifted" education and therefore needs no refinement for high ability students; (2) a college education is not an entitlement, so special support systems are not required; (3) students at the college level are adults with responsibility for solving their own educational problems, especially those of a motivational nature; and (4) the college years are too late to undo attitudes and habits of underachievement which are entrenched.

Rimm (1995) has published her collective thoughts on scenarios of underachievement among high ability students and her suggestions for interventions. Her compendium draws heavily on her own prior work as well as that of other leading theorists in gifted education and psychology, and family dynamics and gender roles. She proposes two personality variable continuums (conformity-nonconformity and dependence-dominance) to identify 13 different prototypes for high ability underachievers and then describes how her "Trifocal Model" for educational/counseling interventions can be used effectively by parents, teachers, and counselors (ideally in combination) to break underachievement patterns for each prototype. However, Rimm substantiates neither her

"prototypes" for underachievement nor the results of her "Trifocal" interventions with empirical data.

Review of Literature

Personal Adjustment

Manaster and Powell (1983) identify the special problems experienced by bright adolescent underachievers as a component of developmental issues. They define these developmental difficulties in three ways: (1) being "out of stage" (ahead of peers in cognitive development); (2) being "out of phase" (having different interests, concerns, sensitivities, and abilities from peers), and (3) being "out of sync" (experiencing severe feelings of differentness and inability to "fit in" with their same age peers). Hollingsworth (as cited by Horowitz and O'Brien, 1985), found more of these types of difficulties or more extreme versions of them, among high ability students with IQ testing above 180. These findings were not, however, confirmed in a subsequent study by Galluci (1988).

Most parents crave having their children identified as "high ability" or "gifted," but not many relish the host of other terms which Whitmore (1980) and Redding (1989) catalogue as descriptors of the underachieving gifted:

anxious, highstrung, overactive, impatient, impulsive, lazy, undisciplined, unmotivated, ungrateful, obnoxious.

In a subsequent study, Redding (1990) suggests that different preferred thinking modes can identify (and predict) which high ability students are likely to underachieve in traditional settings. Traditionally successful gifted students, and successful students in general, can use both right and left brain function, switching from holistic/divergent thinking to analytic/convergent thinking as needed for the academic task at hand. According to Redding, underachievers (especially the verbally gifted) tend to have strong preferences for holistic/divergent thinking; they resist tasks requiring convergent thinking and become impatient and bored, withdrawing or acting out with negative consequences. Similarly, verbally gifted underachievers were found to have high needs for unstructured environments in Redding's study, and a seeming inability to adjust to external demands for structure.

Another way in which high ability/low achievers differ from high ability achievers is in their levels of emotional and social maturity. Rimm (1995), Kaplan (1983), Colangelo (1979), Cornell (1989), and Delisle (1982), stress that

parents, teachers, and authority figures may have very high, unrealistic expectations about the maturity level of bright kids because of their intelligence, articulateness, and impressive vocabularies. Gifted children, however, are no more likely to be exceptionally mature than any other group of children according to Kaplan. In fact, their emotional maturity may even be less than expected for their chronological age due to pampering at home, having been spared the lessons of failure early on, and social isolation and stigmatization by peers. The elementary schooler loved by teachers and adults in general may find him/herself effectively cut-off by same-age cohorts so that the typical throes of adolescent identity crises are all the more painful. Social immaturity has been considered a hallmark of the high ability/low achiever by the researchers cited.

Thomas and Crescimbeni (1966) enumerate seventeen "myths" about high ability children in general that would make any young person *not* want to be one. Being labeled "different" always presents the possibility of social and emotional maladjustments even if the "differentness" is generally regarded by at least some significant others (parents, teachers, adults) as positive. For the culturally different or socio-economically disadvantaged child, family

members as well as peers may reject or denigrate the label "gifted," magnifying even a very young student's need to minimize the dissonance by masking superior ability with underachievement. Conversely, the socio-economically disadvantaged child may have difficulty being identified as gifted and in desperate need of service, even if the family is supportive.

While a child may endure isolation, and even mockery, at the hands of peers during early years, the appropriately increasing alignment with peers and need for peer approval as the teenage years approach may catapult even a formerly achieving high ability student into underachievement. Whitmore (1986) cites gender differences in the way this may play out. If underachievement is seen as a continuum with passive withdrawal on one end and aggressive acting out on the other, gifted girls will tend to opt for the withdrawal end, perhaps still "playing by the rules" and even "getting the grades" but keeping a low profile in opportunities which might cause them to stand out. Boys, more often than girls, will tend to become rebels or "class clowns," refusing to cooperate and "grade-grub" and, instead, entertaining the class, often at the expense of the teacher.

Kaplan (1983) talks about "mistakes" high ability young

people make, but she is simultaneously identifying problematic "places" high ability students "live" due to external demands and expectations. How successfully the individual young person can be in adjusting to these external and internal factors may very well determine how well he or she can produce the traditional measures of academic success. Kaplan claims that "high ability" students labeled "gifted" misunderstand what that label means and may "burn out" or begin underachieving by adolescence due to four misconceptions:

(1) Easy academic success early on leads them to create unrealistically high, perfectionist goals.

(2) They confuse process with product in attaining their accomplishments and lose the joy of exploration and learning as they try to produce "perfect" products, in all areas of endeavor.

(3) They begin to value their cognitive dimension at the expense of all their other personal attributes and define their identities only in terms of academic success.

(4) They begin to view their "giftedness" as a kind of entitlement which means that all things (especially of an academic nature) should come easily and that exceptions should be made for them.

Similarly, Rimm (1987), Whitmore (1986), and Cornell (1989) all suggest that a combination of early, very high family expectations, extended into school environments, can paradoxically create underachievement by setting up patterns of perfectionism, unrealistic goal-setting, overly focused self-concept, and extreme fear of failure. The young child adopts such high standards for academic performance that his/her identity becomes almost solely pegged to success and it becomes easier and less threatening not to try in the first place than to try and fail--or produce something less than perfect. This pattern can become especially exaggerated in adolescence when coupled with a teenager's increasing need for autonomy expressed as overt--or passive/aggressive--sabotaging of parents' goals, ideas, and ideals for a "gifted" child. Studies like Cornell's suggest that high ability children whose parents are somewhat pre-occupied with their children's giftedness (for example, use the term "gifted" around the child, join "parents-of-gifted" groups) are more likely to see themselves--and to be seen by others--as less socially and emotionally well-adjusted. Such correlational studies, however, beg the chicken-and-egg question: which came first, the child's "problem" or the parents' pre-occupation?

The development of social and emotional maturity as the underpinning of personal adjustment to the systems in which the high ability adolescent exists--family, school, peer group--must be considered as a potential factor in terms of whether or not that high ability student will achieve academically or fail to do so.

Review of Literature

Potential Career Focus

At least one respected theorist on the phenomenon of "giftedness" sees the type and extent of an individual's *motivation* as one of the defining characteristics of a "gifted" child or person. Renzulli (1978) stipulates that giftedness can encompass a variety of performance abilities but that it must also entail both creativity in the use of those abilities and *task commitment*. Sternberg and Davidson (1985) agree.

Redding (1990) explored motivational differences as well as preference for convergent versus divergent thinking tasks among students. Successful achievers in traditional classrooms have a reasonable balance between internal and external motivation. Learning for its own sake is rewarding and meaningful, but performing for traditional measures of

success, such as grades, is also acceptable even when the academic tasks may not be intrinsically interesting or rewarding. In Redding's study, the bright underachiever tends to be highly internally motivated with little regard for external motivators. Cynicism, aloofness, and disdain may result for a classroom setting which emphasizes external motivation. Ironically, Redding found that many high ability/high achievers who have high external motivation (frequently coupled with a high need for approval) perform extremely well in traditional settings but exhibit poor self esteem and an under-developed sense of self. Whitmore (1980) hypothesizes these same tenets in her dissatisfaction with traditional learning environments for highly able younger students, thereby concluding that classroom systems--not students--are the basis of the underachievement phenomenon.

Rimm (1995) also speaks to the potential for underachievement when young people do not develop internal motivation for success, especially when children are "overwelcome" and parents overindulge and overprotect them. She sees such children as having everything accomplished for them without the requirement that they take any initiative. According to Rimm, "Doting parents confer on their children

extensive power to manipulate their adult world before they have the knowledge, wisdom, and maturity to wield such power....They expect their needs to be gratified instantly by others, and they literally become addicted to continuous and immediate adult attention. They are not permitted to struggle to accomplish the personal challenges of early childhood." (p.151)

Clearly an important and appropriate developmental task "stressor" during the adolescent and young adult years is the development of a tentative career choice with the concomitant need to focus academic studies. It was an assumption of this study that the high ability student who has made some tentative decisions about career choice is likely to be more internally motivated to "achieve" in school as the means to a longterm end.

Schmitz and Galbraith (1983) point out that one of the "eight great gripes of gifted kids" is that they frequently feel overwhelmed by the number of things they can do well in life. Gifted children often do not have the "luxury" of being "bad" in certain areas which can then logically be ruled out in career definition. This may create a diffusion of motivation for academic pursuits during adolescence as well. William Gray (1982) explores the effectiveness of

comprehensive career planning and mentorship opportunities in enhancing the productivity and fulfillment of gifted students. Could this be especially true for underachievers? Finding an academic/career focus may be the precise route back to performance in academic (or other) arenas, and the social skills component of forming a partnership with a mentor might have important generalizability to other relationships with adults and peers, assisting in the personal adjustment dilemmas of the underachieving as a side benefit.

Knefelcamp (1976) defines one of the primary issues of the college student or young adult as career development: the process of choice and decision-making as it relates to one's self concept. Career choice is likely to be an especially stressful problem for students who may have high abilities in many areas and tend to see themselves, as Kaplan stresses, as having an obligation, maybe even an entitlement, to be good at all things. Externally based motivation to produce a good (even perfect) product may detract from an internally based motivation to choose a career, and thereby the related areas of study, best suited to a high ability individual.

Borman (1978) used career choice as an important but

manageable arena in which to work on realistic goal setting as a motivational enhancement to academic success. He and his colleagues at Texas A&M University developed a three-part career orientation program specifically geared to high ability high school seniors. The phases of the program included an orientation phase, a shadowing experience, and a cooperative educational mentorship.

If high ability/low achievers are generally more internally than externally motivated, and if tentative career choice can provide an internal motivation for academic success as a means to an end, then academic/career mentoring and an aggressive career guidance and counseling effort might be a potentially effective part of a high-school to college transition program for high ability students who are underachieving. It may also be presumed that a low level of potential career focus during the high school years may result in low internal motivation for academic success.

Acquisition of Study Skills

Just as Clark (1979) suggests that children "become" gifted or to learn to "act in gifted ways," Whitmore (1980) and other psychologists and educators cited in the Dowdall

and Colangelo research summary (1982), feel that children *learn* to underachieve as they make their way through school systems toward adolescence. The kinds of underachievement behaviors they adopt may vary with gender and may have pay-off benefits in terms of achieving social acceptance and/or exerting independence from parents--and their expectations--during adolescence.

Kaplan (1983) offers an alternative explanation for some underachievement: a failure in learning to learn. High academic ability children frequently breeze through the primary grades with little or no need to study or to develop good note-taking skills. They never "struggle" with difficult material. Their memories are often remarkable, and "mastery" is something one just seems to *have* rather than something one *develops* through hard work, trial-and-error, and disciplined investment of time. As content becomes more complicated and higher order thinking skills are more often called upon, gifted kids can feel the bottom drop out on them. Achievement may begin to deteriorate due to simple lack of skills or lack of skills coupled with a crippling loss of (an overfocused) identity and extreme fear of failure. "I used to be gifted" is a paraphrase of Thomas and Crescimbeni's Myth #8: "Gifted children ripen early and

rot early. They never amount to much when they become adults."

Delisle (1982) feels that early-learned patterns of underachievement can be reversed. He claims success with older students using a cognitive counseling approach. His contention is that underachievement is a learned behavior which, when understood, can be unlearned. Most likely, however, the unlearning of unproductive behaviors would need to be coupled with productive ones, such as effective study skills. As previously noted, Sylvia Rimm (1995) also advocates a comprehensive counseling intervention, the Trifocal Method, for reversing already established patterns of low achievement.

Whitmore (1980, 1986, 1988), sees the mismatch between the learning needs and styles of gifted children and the set-up of the traditional American classroom as the primary root of gifted underachievement. She cites the relentless reliance on structure, rules, rote memorization, and busy work, rewards for task commitment, and general stifling of divergent or creative responses as extremely frustrating for the underachieving high ability learner and debasing to his/her identity, self-concept, and self-esteem. The result is detachment, withdrawal, "tuning out" and "turning off"

the "system" by either passive, or active, underachievement and a consequent failure to develop the kinds of skills at an early age which will allow success in later, more complex learning. Just as she sees the problem residing primarily in the schools, she sees the answer also lying there: early identification of the highly gifted headed for underachievement, special education catering to their special needs and styles, and support from the educational community.

Perkins (1991) provides an extensive summary of the research and thinking on the concept of "teaching" study skills, the various study skills/strategies most widely used and researched, and the study skills measurement systems developed to date. While she cites problems in generalizing any of the research findings to broad, heterogeneous populations, she concludes that results are "encouraging" in that specific groups have been shown to benefit from specific interventions, particularly in terms of recall and advantageous use/manipulation of mood states such as anxiety versus relaxation. Her emphasis is on college student populations, and she cites no extant studies specifically targeted at high testing/high ability populations.

Summary of Literature Review

Although the number of empirical studies concerning underachieving students of high ability is small, a relatively large body of theoretical and qualitative thinking literature exists about this group. Longitudinal studies of "gifted" individuals date back to the early years of this century and Dowdall and Colangelo (1982) reviewed numerous studies about "gifted underachievement" over the preceding 20 years.

Joanne Rand Whitmore created the seminal work on the subject with her *Giftedness, Conflict, and Underachievement* (1980) followed by numerous studies of the topic. General tenets are her belief in the culpability of traditional educational settings in creating underachievement and her insistence on early intervention as necessary to preventing underachievement patterns from developing. Other researchers such as Rimm, Cornell, Redding, Manaster and Powell, and Miller and Goldblatt hypothesize the creation of underachievement patterns as the consequence of innate personality and/or developmental difficulties with ensuing or concomitant family dynamics issues.

Kaplan sees the underachievement "problem" as stemming from the failure to acquire basic learning skills and

strategies by high ability students who do not need them during the early school years and who fall prey to misperceptions about themselves and their abilities during adolescence.

In addition to general work on educational strategies for high ability students, Whitmore advocates aggressive intervention strategies with underachieving students; Rimm, Clark, Colangelo, Janos and Robinson, and Kaplan advocate school and family-based counseling interventions. Such educators as Gray, Borman, and Knefelcamp have advocated the use of career orientation interventions for high-ability students. Their efforts could have implications for high ability/low achievers in terms of increasing internal motivation for academic success as a short-term means to a longterm end.

CHAPTER 3

Collection of Data

Population and Sample

The sample frame for the population consisted of high academic ability high school seniors in the Richmond and Tidewater areas of Virginia. A private boys' school in the Richmond area as well as the school divisions of Henrico County, New Kent County, Williamsburg-James City County, York County, Gloucester County, Poquoson, Hampton, and Newport News were invited to participate by identifying twelfth graders who had scored in approximately the top 15% of the takers of the Scholastic Assessment Test (SAT I) of the Educational Testing Service. Specifically, students must have, at some point, scored a 650 or better on the math or verbal section of the SAT I and have a combined score of 1100. Approximately 500 survey packets were distributed to the participating schools and 155 useable sets were returned. (Two sets were discarded for incomplete data.)

The SAT I was deemed an appropriate measure of academic ability because of its almost universal acceptance by colleges and universities as the most important adjunct to high school record in terms of predicting at least freshman

grades in college. At highly selective colleges and universities, SAT I scores tend to correlate even more strongly with freshman year grades because there is less variability in high school records (course content, gpa, etc.) among matriculating students. Although concerns are frequently raised about the cultural sensitivity of this measure, comprehensive statistical analyses are continually performed by the Educational Testing Service to eliminate test items which appear culturally biased by differential correct completion.

Data Gathering

School personnel were asked to identify eligible participants and provide them with the survey instruments. Most survey packets were hand-delivered to student participants along with information sheets, permission forms, and response cards (Appendices C,D,E). School personnel returned lists of participants to the researcher identified only by a school-division-specific identification code with the appropriate SAT score and gpa data appended as well as demographic data such as gender and ethnicity. Students mailed back survey instruments to the researcher with no identifying information other than the

identification number. The full-size return envelope was provided by the researcher with postage already affixed. Under separate cover, students returned a response postcard (Appendix E) with name and address to be used as a "raffle ticket" for a drawing for a cash prize in recognition of their willingness to participate. The estimated time commitment was described as 60 minutes. Students were also able to request a synopsis of the findings of the study if they so desired, and participating school division personnel were also given that option. Students were also asked to specify whether or not they would be interested in participating in future research studies.

Participants were volunteers, but school personnel were asked to encourage broad-based participation to minimize any pattern of sample bias related to non-participation (SES, gender, ethnicity, academic achievement level, etc.). Feedback was solicited from school personnel regarding any perceived patterns of non-participation. None were reported. In addition, while approximate rates of return varied from one school to another, schools in the divisions with the lowest overall SES standings had some of the highest response rates.

Appendix F is a sample of the participation

solicitation letter sent to school/division heads, and Appendix G is a sample of a roster returned from a school. Precise return rates cannot be calculated since schools estimated the number of survey packets needed but did not account for all they received.

Based on the survey instruments used and the statistical measures to be employed, it was determined that a sample size of 60 participants would be adequate; 155 usable data sets were returned. (Two data sets were incomplete.)

Instrumentation

The dependent variable to be investigated in this study was the grade point average (gpa) of the high ability high school seniors who participated, specifically the seventh semester gpa. Although it was not possible to statistically control for differences in gpa which may exist across the school divisions participating, all schools in the study compile grades on a 4-pt scale with some weighting for honors, AP, or accelerated courses.

The intent of this study was to explore the relationships between gpa of high ability high schoolers and three other variables: overall personal adjustment, degree

of potential career focus, and level of study skills acquisition and attitudes.

Personal Adjustment

Overall personal adjustment was measured by the Assessment of Interpersonal Relations Scale (AIR, 1993) developed by Bruce A. Bracken and produced by the PRO-ED publishing company. (Appendix H) According to its authors, it is a thoroughly researched and standardized clinical instrument (which) assesses the quality of adolescents' interpersonal relationships in a hierarchical fashion including global relationship quality and relationship quality within three context-dependent domains: family, social, and academic. The instrument consists of five 35-item subscales and can be administered in approximately 20 minutes.

Each AIR subscale evidences reliability above .90 and the total scale score also exceeds an alpha of .90 at all age levels. According to the publishers, the AIR has been shown empirically to identify clients with previously known or suspected relationship difficulties. Separate statistical analyses have been conducted to examine race, gender, and age trends in interpersonal relationships.

Standard scores are reported as deviation quotients (M

= 100, SD = 15) and as t-scores (M = 50, SD = 10). Results can be portrayed graphically and performance can be described in terms of relative and normative relationship strengths, and weaknesses.

Career Focus

The AIR was co-normed with the Multidimensional Self Concept Scale (MSCS) on a national sample of 2,601 children and adolescents between the ages of 9 and 19. The standardization sample was large and representative of the U.S. population.

Degree of potential career focus was assessed using the Degree of Career Focus Survey a self-report, likert-type inventory adapted from an instrument developed by John Holland, et al, and published by the Consulting Psychologists Press (1980). (Appendix I) The instrument consists of 18 four-position-choice statements. For this study, two questions concerning the types of career/vocational information and guidance needed or requested by the client were eliminated. Scores were calculated on a 4-pt system with "4" indicating confidence in career focus or self knowledge and "1" indicating lack of confidence or knowledge. This questionnaire is currently used by the William and Mary Career Center staff as an

initial data collection piece for career guidance and counseling. Some of the response statements were altered slightly to fit the high school sample appropriate for this study.

Study Skills

The third variable was the level of use, and attitude toward, study skills. This was measured using the high school version of the Learning and Study Strategies Inventory (LASSI, 1990) published by the H&H Company, Inc. (Appendix J) This instrument purports to measure "skills that are critical for academic success in high school and also those skills instrumental for making a successful transition to college."

The instrument consists of ten subscales with reliability coefficients varying from .68 to .82. The scales measure academic attitude, motivation, time management, information processing, test-taking strategies, anxiety, concentration, ability to select main ideas, and initiative in using or creating study aids. The instrument also includes a self-testing scale.

In a survey conducted by the researcher of all public and private four-year colleges in Virginia, the LASSI was the most commonly cited instrument used for assessing study

skills and learning strategies for college students. It is interesting and important to note, however, that Perkins (1991), in a validity study of the college version LASSI, found the scale to be reliable but to possess no construct validity (as measured by factor analysis). In addition, the ten LASSI scales showed "low predictive validity when first semester grade point average was the performance criterion."

The use of the LASSI in this research study differed from its use in Perkins' study in several significant ways. First of all, a different form of the LASSI was used (High School rather than College version). As was the case in Perkins' study, however, the User Manual for the 1990 High School Edition also fails to provide validity data.

Secondly, the criterion measure used in this study, a seventh semester cumulative high school gpa, representing three and a half years of academic work, is likely to be a more stable and meaningful representation of sustained academic achievement than first semester college gpa.

Thirdly, Perkins calls for additional research on the LASSI across a more heterogeneous population. She alludes to the high test scores and high secondary school academic achievement of her William and Mary sample. While the research subjects in this study were also high SAT scorers,

their academic achievement levels, and demographic diversity, were broader than Perkins' subjects, at least in terms of variation in gpa's.

Despite the differences in these two studies, however, Perkins' warning about the use of results from research involving the LASSI was carefully considered during data interpretation and in forming this study's conclusions and recommendations for intervention strategies.

Research Design

This research proposal involved a correlational study with several bi-variate comparisons and two multiple regression analyses. As defined by Borg and Gall (1989), "multiple regression is a multivariate technique for determining the correlation between a criterion variable and a combination of two or more predictor variables." Multiple regression has become one of the most widely used statistical techniques in educational research.

In this study, seventh semester gpa was the criterion variable and the proposed predictor variables included level of personal adjustment, degree of potential career focus, and degree of study skills/learning strategies acquisition. All data are interval data. In addition, bivariate

correlations were calculated across all variables, and multiple regression tests were done on the various LASSI scales versus gpa and SAT scores and also on the subscales of the AIR and both gpa and SAT scores.

Because the surveys were self-administered, standard procedures could not be guaranteed, but every effort was made to insure that participants understood that there were no right or wrong answers. The assurance of anonymity should also have reduced any tendencies for respondents to provide socially acceptable responses. This was particularly important since all respondents were volunteers, a group generally assumed to be more prone to providing socially accepted responses.

Information collection was accomplished with confidence in the confidentiality of the data since neither the high school personnel involved, nor the researcher, can attach any specific data to individual students.

While some predictive values were determined as a consequence of the statistical analysis, causal relations cannot be ascertained. However, it was the supposition of this researcher that even correlational relationships might provide fruitful information for designing subsequent intervention strategies.

Specific Research Hypotheses

This study put forth three specific research hypotheses to be statistically assessed as traditional null hypotheses. Each hypothesis deals with the relationship between a seventh semester cumulative high school gpa, expressed as a three-digit number with two decimal places (e.g., 3.58) as is typical in most high schools, and one of three variables studied, among high school seniors testing in the top decile on the Scholastic Assessment Test (SAT I).

(1) There is no statistically significant relationship between gpa and degree of personal adjustment as measured by the Assessment of Interpersonal Relations Scale (AIR).

(2) There is no statistically significant relationship between gpa and degree of potential career focus as measured by the Holland, et al, "Career Focus" survey.

(3) There is no statistically significant relationship between gpa and the level of knowledge and use of study skills as measured by the Learning and Study Skills Inventory (LASSI).

Data Analysis

Data analysis on the predictor and the criterion variables followed procedures for bivariate correlation and multiple regression analyses as outlined by Borg and Gall. Bivariate correlations were calculated between the following sets of variables: gpa and verbal SAT, math SAT, and total SAT; gpa and career focus measure; gpa with the TRI (global) component of the AIR. Multiple regression analyses were performed as follows: gpa with all subscales of the AIR; gpa with all subscales of the LASSI.

In multiple regression studies, initial correlational data establishes the strongest predictor variable, and then a "stepdown" system can be used to assess which of the other variables adds most significantly to the prediction equation. This will not necessarily be the variable with the next strongest correlation. The researcher's assumption was that personal adjustment would be the strongest, or most accurate predictor, and then the other predictors would be analyzed to determine how much additional predictive value they add to the equation. A power analysis indicated that a sample size of 60 was sufficient for detecting moderate relationships. As previously cited, 155 cases were analyzed.

Statistical error rates for Type I errors were set at .05.

Ethical Considerations

This research study was appropriately considered of "minimal risk" to human subjects according to the standards cited by Borg and Gall (1989). Participants' anonymity and confidentiality were completely safeguarded. High school personnel matched SAT scores and gpa's with pre-assigned survey instrument identification numbers but they have had no access to individual survey result data. The researcher has no way of identifying SAT and gpa providers individually.

Participants, and their parents or legal guardians (since most were minors), signed the participation consent form provided (Appendix D) assuring them of confidentiality and the option of withdrawing from the study at any time. Logistically, it was not possible for the signed permission forms to be returned to the researcher and still maintain participant confidentiality. Therefore, the forms were returned to school personnel before the data sets were distributed. A cover letter explaining the purpose of the study provided rudimentary information and the option of contacting the researcher for additional information.

Participants were also offered the option of obtaining a synopsis of the research results.

All rules, regulations, and stipulations laid down by the Human Subjects Review Committee of the College of William and Mary were strictly adhered to.

In addition, every effort has been made to critically assess the findings of this research in terms of the limitations, possible confounding factors, and guidelines for judicious and appropriate use in formulating educational and counseling intervention strategies for appropriate populations.

Summary

A volunteer sample of high school seniors who test very high on the Scholastic Assessment Test (SAT I) of the Educational Testing Service (ETS) was garnered from public and private high schools in the Southeastern region of Virginia. With the help of appropriate school personnel, and the permission of parents, these students were provided with three survey instruments designed to assess levels of personal adjustment, potential career focus, and study skills knowledge and use. Scale scores on these instruments were correlated with the student's seventh semester

cumulative high school gpa and SAT scores. All data were obtained anonymously and maintained confidentially. Bivariate correlation and multiple regression analyses were used to test three research hypotheses dealing with the relationships between and among the five variables. Research was conducted, and results reported, in accordance with the professional and ethical standards of the School of Education of the College of William and Mary and under the direction of the William and Mary faculty with approval from the College of William and Mary Committee for the Protection of Human Subjects. It is hoped the research findings may be helpful in providing the empirical underpinnings for future educational/counseling intervention strategies for high academic ability high school students in the transition to college, especially for such students whose academic achievement has not been commensurate with their scholastic potential throughout their high school years.

Chapter 4

Results

Descriptive Statistics

Approximately five hundred data packets were distributed through school personnel (primarily guidance counselors) in 20 high schools in the suburban Richmond, and the Tidewater, and the Middle Peninsula areas of Eastern Virginia. Overall return rate was calculated at 38% with differences among schools ranging from approximately 10% to approximately 56%. Precise return rates cannot be calculated since most of the high schools/divisions requested an approximate number of survey packets and distributed them as widely as possible among eligible subjects. However, no attempt was made to account for all eligible subjects at any high school, and the actual number of eligible subjects at any high school would have changed over the data collection period as May SAT score results were received.

All participating high schools except one (a private boys' school) were relatively large, comprehensive public high schools.

Of the 157 returned survey packets, 155 were used in the statistical analyses described below. Two sets, each of which had only two of the three survey instruments completed, were not used. Some of the remaining sets exhibited one or more missing items, but in these cases, the researcher was able to calculate a pro-rated score based on instructions provided by the scoring manual for just such circumstances.

Of the useable data sets, the subjects were 57 men and 98 women with 9 African-American subjects, 13 Asian American subjects, and no subjects who identified themselves as either Hispanic/Latino or Native American. Fewer than 10% of the subjects (14) identified themselves, and completed their survey instruments, as children in single-parent families. As described in Chapter 3, all subjects had at least 650 on either the SAT verbal or math section and a combined score of at least 1100.

As discussed in Chapter 1, the researcher had some concerns about the comparability of gpa's across the sample. However, all schools whose students participated used a four-point grading scale with the possibility of a limited

number of gpa's over 4.0 due to the weighting of more advanced classes. A rough measure of comparability across grades at these high schools was attempted by determining the 1996 range for the top 10% of the class. Eleven of the 20 participating schools exhibited a first decile cutoff gpa in the 3.67 to 3.81 range. Two schools exhibited a 3.4 to 3.5 range for the top decile, and one school had a top decile mark in the 3.9 area (exact gpa not discernible due to small number of students and non-continuous distribution of grades; i.e., no one student fell at exactly the top 10% level at this school).

As described in Chapter 1, no attempt was made to find "underachievers" in these high schools due to the problems of definition cited. Rather, subjects were identified as "high ability," based on their SAT scores, and gpa's were collected from among this high ability group. The range of gpa's across the group spanned the interval from 1.14 to 5.00. One hypothetical definition of "underachiever" at the high school level would be to identify students whose SAT scores place them in the top 10% of the national sample, but whose gpa's place them below the top 10% at their respective high schools. Using this hypothetical definition, and choosing 3.75 (the mathematical mean across the various

schools and divisions) as an operational definition point for top 10%, 49 subjects might be perceived as "underachieving," nearly one third of the sample. An alternative to this hypothetical definition of underachievement would be to use a version of the commonly accepted "significant discrepancy" model with combined SAT as the predictor of gpa. College Board data sets the correlation of these two variables at a moderate level of .42. Because of the small size of "underachievers" likely to be identified using either method, the differences in grading scales from one school to another, and the possibility of false positives (overall high achievers with one disastrous semester, for example), the researcher was reluctant to pursue statistical analyses of an operationally or statistically defined underachieving subgroup.

The mean, minimum, and maximum scores for each variable measured are provided in Table 1, as well as the standard deviation for each. The possible range for SAT scores, as limited by the criteria for eligibility, extended from 300 to 800 for VSAT and MSAT. Please note, however, that no SAT score fell below 430. Therefore, any subjects with either the verbal or math SAT below the national mean were at least within one standard deviation (100 points on the 200-800 SAT

scale where mean = 500). In addition, since the standard error of measure for the SAT is 28 points, these minimum scores approximate no lower than the national average. "Career Focus" scores had a possible range from 18 to 72. All LASSI and AIR values are expressed as t-scores (converted directly from scaled scores or from percentile scores respectively). Descriptive statistics are presented in Table 1.

Research Hypotheses

The statistical analyses performed relate to the study's original research hypotheses as follows:

Hypothesis #1

"Among high testers, students showing higher levels of personal adjustment would tend to have achieved higher gpa's."

The null hypothesis was rejected at the $p < .05$ level with both the global AIR score (the TRI) and the Female Peers subscale of the AIR showing significant correlation.

Hypothesis #2

"Among high testers, students demonstrating a higher degree of career focus would tend to have achieved higher gpa's." The null hypothesis was sustained by the bivariate correlation analysis.

Hypothesis #3

"Among high testers, students demonstrating a higher level of knowledge about, and use of, effective study skills would tend to have achieved higher gpa's."

The null hypothesis was rejected at the $p < .05$ level of significance for the motivation subscale of the LASSI.

TABLE 1

Descriptive Statistics for All Variables (n=155)

	Variable	Mean	Std Dev	Minimum	Maximum
	GPA	3.88	.65	1.14	5.00
	VSAT	673.48	60.47	430.00	800.00
	MSAT	648.97	74.79	430.00	800.00
	TotSAT	1322.32	97.75	1100.00	1600.00
	Career Focus	50.26	8.56	29.00	72.00
L	Attitudes	48.41	10.25	27.00	72.00
A	Motivation	51.55	11.55	27.00	72.00
S	Time Management	48.14	10.38	27.00	72.00
S	Anxiety	57.56	9.62	27.00	72.00
I	Concentration	49.65	10.81	27.00	72.00
	Information Processing	53.03	9.95	27.00	72.00
	Selecting Main Ideas	53.46	9.13	27.00	72.00
	Study Aids	49.09	9.51	27.00	72.00
	Self-Testing	47.74	10.95	27.00	72.00
	Test-Taking Strategies	55.69	8.48	27.00	72.00
	Mother	47.97	8.04	27.00	71.00
A	Father	50.97	7.75	34.00	71.00
I	Male Peers	48.89	8.24	31.00	69.00
R	Female Peers	46.08	8.61	27.00	67.00
	Teachers	48.31	7.81	27.00	67.00
	Global	45.02	6.54	30.00	65.00

Data Analysis for Research Hypotheses

The following statistics were run on the collected data:

(1) Bivariate correlations across all of the following: gpa, VSAT, MSAT, TSAT, Career Focus, TRI (global score of the AIR).

(2) Multiple regression analyses across (1) all subscales of the LASSI (expressed in t-scores) against gpa, and (2) all non-global subscales of the AIR (M,F,MP,FP,T) against gpa.

Significance was set at p. < 05 for all analyses. Results of the bivariate correlations are shown in Table 2. The shaded cells indicate statistically significant correlations. Parentheses = repeat values.

Statistically significant correlations were found between the following variables.

(1) GPA and Math SAT

(2) GPA and Total SAT

(3) GPA and the TRI (global AIR score)

(4) Math SAT and the TRI

(5) Total SAT and both Verbal and Math SAT subscales.

Career Focus (CF) scores did not correlate at a statistically significant level with any of the other variables. (CF and TRI were not correlated with each other.)

GPA and SAT scores showed a moderate correlation (.4107) while the correlation coefficient for GPA and TRI (.2348) is relatively small.

Table 2

Bivariate Correlation Coefficients and Probability

SAT, GPA, CF, and TRI

	GPA	VSAT	MSAT	TotSat	CF	TRI
GPA	X	(.1072	(.4531)	(.4107)	(.0514)	(.2348)
VSAT	.1072 p=.184	X	(.0357)	(.6458)	(-.0081)	(-.0457)
MSAT	.4531 p=.000	.0357 p=.659	X	(.7859)	(0584)	(1985)
TotSAT	.4107 p=.000	.6485 p=.000	.7859 p=.000	X	(.0402)	(.1217)
CF	.0514 p=.526	-.0081 p=.921	.0584 p=.470	.0402 p=.619	X	Correlation not tested
TRI	.2348 p=.003	-.0452 p=.577	.1985 p=.013	.1217 p=.132	Correlation not tested	X

A series of stepwise multiple regression analyses were conducted for GPA, SAT, and the LASSI and AIR subscales; and the significant results are presented in Tables 3 and 4. No order of steps was specified; therefore the statistics package selected strongest predictor for each analysis. In the first analysis, GPA was the criterion and the ten LASSI scales were the predictor variables. The result of this first analysis indicated that MOT (the motivation subscale) was the only significant predictor. The R^2 of .24 indicates a weak relationship.

In the second analysis, the ten LASSI subscales were the predictor variables for the verbal and math subscales and the total SAT score. The TST (Test-Taking Strategies) subscale of the LASSI showed a significant prediction value for the verbal SAT, and for Total SAT with weak relationships. The ANX (Anxiety subscale) proved a significant predictor for the Math subscale of the SAT but with a weak relationship.

In the third regression analysis, GPA was the criterion measure and the five subscales of the AIR (Father, Mother, Female Peers, Male Peers, and Teacher) were the predictor variables. The results of the analysis indicated that the relationship-with-father score was the only significant

predictor. The R^2 of .1 indicates a weak relationship.

In the fourth regression analysis, the verbal and math subscales and the total SAT score were the criterion variable and the AIR subscales were the predictors. The results of the analysis indicated that only the female peers subscale proved a significant predictor for the total SAT score and the math SAT. The relationships were weak (R^2 = .04 and .03 respectively).

There were no significant results for the other seven subscales on the LASSI nor for the other three subscales on the AIR.

Table 3
Significant Results, Multiple Regression Analyses
LASSI, GPA, SAT

LASSI Subscales	GPA	VSAT	MSAT	TotSAT
MOT Motivation	MR=.49 R^2=.24 f=48.18 sig=.0000			
TST Test Taking Strategies		MR=.17 R^2=.03 f=4.43 sig=.0370		MR=.22 R^2=.05 f=7.34 sig=.0061
ANX Anxiety			MR=.19 R^2=.04 f=7.46 sig=.0071	

Table 4
Significant Results, Multiple Regression Analyses
AIR, GPA, SAT

AIR Subscales	GPA	VSAT	MSAT	TotSAT
Father	MR=.33 R^2=.10 f=17.69 sig=.000			
Female Peers			MR=.19 R^2=.04 f=5.84 sig=.0168	MR=.20 R^2=.04 f=6.53 sig=.0116

Additional Findings

The researcher was struck by the seemingly high scores on the anxiety subscale of the LASSI which this sample seemed to exhibit, and the mean "ANX" score for the group (t-score=57) places the sample as a whole at the 75th percentile for anxiety. The test-taking strategies mean t-score for the group was also reasonably high (55).

T-tests performed after the initial bivariate correlation and multiple regression analyses revealed that the sample in this study had mean scores significantly different from the means of norming populations of the LASSI and the AIR on the following subscales: (LASSI) Attitudes, Time Management, Anxiety, Information Processing, Selecting Main Ideas, Self-Testing, and Test-Taking Strategies; (AIR) Mother, Female Peers, Teachers, and Global. See Table 1 to discern the direction differences. These positive and negative aberrations may have implications for further research as discussed in Chapter 5.

As noted above, the anxiety subscale showed a statistically significant prediction value for Math SAT score, and Verbal SAT score showed a statistically significant prediction value for the test-taking strategies

subscale. It is not clear that these findings have any relevance or meaning for this study, however, since variance in gpa rather than in SAT was the intended focus. In fact, these findings and the correlation between SAT and gpa in this sample may suggest some confounding factors due to covariance.

CHAPTER 5

Discussion and Conclusions

Hopes for the Study

The original justification for this study was twofold: (1) to attempt to isolate three specific factors previously identified by research and speculation as possible contributors to academic underachievement in high school by high scorers on the SAT; and (2) to use these factors to build an intervention strategy which might be used by both high school and college admission personnel to identify, encourage, and help gifted underachievers in the transition from high school to college. Clearly the results were mixed.

Findings of the Study

The statistical analysis of the data suggests that

(1) There is some connection between overall personal adjustment and both GPA and SAT, especially relationships with the father and female peers. However, correlation is not causation, so the connection may be limited to predictive value. These results may also have been skewed by the high proportion of female subjects (n=98).

(2) Even among a high school population where the SAT range has been truncated, there remains a

correlation between SAT and gpa. This covariance may have clouded other results.

(3) Of the ten LASSI scales measuring different aspects of learning and study strategies, only motivation was identified as a significant predictor of gpa for this group.

(4) The degree of career focus, at least as measured in this study, does not seem to predict achievement as measured by high school gpa.

Possible Study Shortcomings

While the number of subjects surveyed for whom data was analyzed was more than adequate for statistical power, it is possible that there were unknown sources of sampling bias that obscured results. Students who participated varied substantially across actual seventh semester gpa's and came from a variety of high school student bodies across southeastern Virginia. However, the logistical difficulties of comparing eligible participants versus eligible non-participants may have impeded the recognition of some sample bias. In addition, as previously noted, participation was on a voluntary basis, and the participating volunteers may have been able to discern what they perceived as the "socially desirable" answer or pattern. These precautions

were taken by the researcher to minimize their motivation to do so: (1) assuring anonymity; (2) stressing the lack of "right" answers, and (3) scoring all data away from subjects to minimize any pre-occupation with the "results" of the three questionnaires.

It is also possible that the three instruments were inadequate. The validity, reliability, and norming information for the AIR (described in Chapter 3) suggest that it was appropriate for use with the sample population, but t-tests indicated that this sample demonstrated significantly different means from the norming population for the AIR.

The reliability of the LASSI has been established but its validity is not as well documented, and Perkins (1991) describes some shortcomings in the use of the college version. The high school version may have similar shortcomings, despite the fact that it was hoped a gpa based on seven semesters of school work might prove a more meaningful dependent variable than a college freshman year gpa. It should be noted that the participating subjects used the entire t-score range on all ten of the LASSI subscales (27-72), but that this sample demonstrated significantly different means from the norming population

for the LASSI.

The Career Focus questionnaire used to measure this variable was not rated for either validity or reliability. The researcher's attempt to contact the publishers and the original developers met with no success (i.e., no response). It is highly possible that this instrument was not a good measure of degree of career focus for the sample population, despite its face validity.

All questionnaire *responding* was done on the students' own time, so data were self-reported and there were no standardized procedures. None of the three instruments used involved timed measures, however, and all questionnaire *scoring* was done by the researcher to insure standardization and to reduce any inclination among participants to create a socially acceptable profile.

The finding that gpa correlated with SAT scores, even among this high scoring group, does not seem surprising but may suggest that the SAT parameters used to capture the sample population were not stringent enough to differentiate a group of students relatively homogeneous in their degree of academic giftedness, thereby dimishing the relative influences on gpa by the three factors studied.

Implications

This study was an attempt to isolate at least three factors which correlate with underachievement among academically gifted adolescents. Correlation does not impute causation, but markers for underachievement may help identify gifted high school students at risk for poor grades and diminished college entrance options. Such identification might be helpful both in formulating and providing interventions and also in identifying gifted underachievers who are better risks in college admission processes. Care was taken to consider factors which presented practical application possibilities for summer, or longer term, interventions rather than to focus on interesting but less changeable or practical differences such as internal versus external motivation and convergent versus divergent thinking (Redding, 1990).

In light of these original goals, results of this study were mixed and inconclusive, but provide at least some empirical feedback for some of the prevailing theories about underachievement among the gifted. The theoretical framework of this study encompassed three prevailing models for gifted underachievement which parallel prevailing counseling schools or approaches: personality theories,

psychodynamic or interpersonal theories, and learning and motivation theories. Just as the causes for gifted underachievement are perceived to be potentially multi-faceted, the potential solutions, that is the comprehensive intervention programs outlined in Chapter 1, are envisioned as requiring a cognitive-behavioral, multi-modal approach such as Lazarus advocates generally, or Rimm (1995) and Delisle (1982) advocate specifically for gifted underachievers.

The results of this study substantiate the rather unsurprising idea that motivation to use good study skills is a significant predictor for academic performance. Perhaps more interestingly, however, is the failure to find that other aspects of study skills use or knowledge contributed significantly to the prediction of academic success in this study, although bivariate correlation analyses might show some correlations. This failure might be perceived as casting some doubt on Kaplan's ideas (1983) relevant to the failure of gifted underachievers to learn good study skills. However, it does not either support or refute Delisle's theory (1982) of underachievement as a maladaptive learned behavior for short-term gains. Similarly, the failure to establish a predictive link

between study skills and gpa, coupled with the lack of predictive connections between gpa and relationships with teachers (the last subscale of the AIR) casts some doubt on Whitmore's belief that unsatisfactory school experiences, which might be reflected by unsatisfactory relationships with teachers, underlie patterns of underachievement among the gifted. Of course, it would not be appropriate to assume, based on this study alone, that satisfactory relationships with teachers do, or do not, imply a general satisfaction with school. The latter type of satisfaction, if an adequate measure can be found or devised, might offer more support for Whitmore's contention.

Although the teacher subscale scores of the AIR showed no statistically significant predictive value for gpa, it was interesting that two subscales showed predictive value: satisfactory relationships with the father and gpa and satisfactory relationships with female peers with SAT. Clearly additional work needs to be done to tease out gender differences which might shed light on these results. As cited above, both Janos (1986) and Whitmore (1986) have identified gender differences in how underachievement is manifested. It is also possible that the higher percentage of female subjects in the sample skewed results. The fact

that any of the subscales predicted gpa lends some credence to the family dynamics theories of Cornell (1989), Janos (1985), Kaplan (1983), Manaster and Powell (1983), and Rimm (1995). However, it must be remembered that correlation does not prove causation, and a potential chicken-and-egg dilemma may be involved as cited for Cornell's study of parents of gifted students. Are less positive parent or peer relationships the cause, or the result, of gifted underachievement?

The lack of any significant correlation between degree of career focus and gpa suggests a rather disappointing dead end for possible intervention strategies in the area perceived by the researcher as having the most practical and logistically feasible intervention possibilities. Renzulli (1978) as well as Sternberg and Davidson (1985) see "task commitment" as part of the very definition of giftedness and it was presumed that career focus might supply task commitment to inspire academic achievement. It may not be necessary to discard this intuitively logical application area, however. As cited above, the specific instrument used to measure career focus may have been faulty, or it may have been administered too early in the mental and maturational period of adolescence and young adulthood. Perhaps the

"turn on" to focused academic pursuits occurs more routinely in the latter years of the college experience rather than in the last months of high school.

It may well be that additional empirical studies are needed but that only qualitative studies, longitudinal and comprehensive documentation of what happens to and for individual gifted underachievers, however they may be identified, many provide the keys to the greater or more complex picture of what causes, and what cures, underachievement among the gifted. In the meantime, until successful intervention strategies can be devised based on both quantitative and qualitative findings, perhaps the second prong of the twofold purpose of this study, the attempt to identify characteristics which separate gifted underachievers who are better college-attending risks from those who are not as likely to succeed, will rest on the findings of personality-oriented researchers such as Redding (1989, 1990) and Heath (1992). Perhaps factors such as internal versus external motivation, convergent versus divergent thinking, general optimism, community involvement, and emotional maturity can be made measurable in ways appropriate to a college admission process in order to provide wider college admission options for gifted high

school underachievers.

Further Research

The specific variables which this study attempted to measure correspond to only some of the numerous schools of thought about gifted underachievement documented in Chapter 2. Not assessed in this study were (1) the traditional-school-setting dilemma espoused most strongly by Whitmore and (2) the personality difference theories such as convergent/divergent thinkers and internally versus externally motivated students (Redding, 1990). Other studies might look at these constructs.

Qualitative research involving case studies of identified gifted underachievers may be another productive research avenue. Although this study attempted to avoid the definitional problems of such an approach, the researcher is satisfied that at least some underachievers did indeed participate; however, the number of participating subjects who might be operationally defined as underachievers was not likely to be large enough for statistical significance. Perhaps they are among those who expressed a willingness to participate in future studies of gifted students. A preliminary effort to distinguish characteristics of high, medium, and low achievers in this sample through analysis of

variance might be helpful. High school personnel such as guidance counselors, teachers in advanced courses, and gifted and talented coordinators would be excellent resources in finding appropriate subjects for qualitative, and perhaps quantitative studies and in expediting their participation. In addition, interview strategies might be developed for only the highest and lowest achievers to tease out differences qualitatively.

It might also be possible to design and implement a true experimental design project in which some underachieving high schoolers would participate in a summer intervention program prior to college enrollment while a similar profile control group did not. Longitudinal studies on gpa, graduation rate, and subjective evaluators of success and satisfaction might be devised. This approach would involve both logistical and ethical challenges for college personnel. Regrettably this study did not clearly identify what might be some appropriate areas on which to focus the intervention; perhaps other studies will. Attention might be given to gender differences across the correlations studied since Janos (1986) and Whitmore (1986) suggest that underachievement plays out differently according to gender. A sample with a higher response rate

(i.e., a number allowing for statistical significance) for operationally defined underachievers might prove fruitful in distinguishing correlations for the true target population.

Lastly, it is ironic that only the "motivation" subscale of the LASSI proved a significant predictor for gpa. For that, indeed, is the quandary all helping professionals who work with gifted underachievers face: what *is* that magic motivator which will turn those patterns of underachievement around. Will it come in college? In "real life"? Perhaps there are as many varied answers to that fundamental question as there are "gifted underachievers." Appendix H, another essay from a William and Mary application, documents one such transformation.

Clearly the writer seems to have benefited from the peer group associations whether or not his summer experience was designed as an intervention for underachievement. Perhaps the therapeutic effect of a group experience with other gifted students is a "magic wand" which other research efforts may explore.

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APPENDICES

Appendix A
Sample Transcript

STU. 600000590540
WITHDREW

DOB [redacted]/73
GRADUATED

SEX M

[redacted]

GRADE 08 [redacted]
1986-87 [redacted]
MEM. 0 ABS. 0 ATT. 0

COURSE	MARK	CRED
ALGEBRA 1	B	1.00
SPANISH 1	B+	1.00
TOTAL		2.00

GRADE 09 [redacted]
1987-88 [redacted]
MEM. 182 ABS. 0 ATT. 182

COURSE	MARK	CRED
ENGLISH 9	D+	1.00
ENR GEOMETRY	A	1.00
MOLECULAR BIOL	C+	1.00
SPANISH 2	B	1.00
HEALTH & PE 9	B	1.00
HEALTH	D+	.00
BEGINNING BAND	B+	.50
CONCERT BAND	B	.50
PR OF SCI TECH	A-	.50
PR OF SCI TECH	C+	.50
TOTAL		7.00

GRADE 10 [redacted]
1988-89
MEM. 180 ABS. 1 ATT. 179

COURSE	MARK	CRED
ENGLISH 10 UC	F	.00
WORLD HIST UC	F	.00
ENR ALG 2/TRIG	A	1.00
ANALY CHEM	B	1.00
SPANISH 3	C+	1.00
DRIVER ED	B	.00
HEALTH & PE 10	B+	1.00
THEOR ELECTRON	F	.00
CONCERT BAND	A	.50
TOTAL		4.50

GRADE 11 [redacted]
1989 [redacted]
MEM. 0 ABS. 0 ATT. 0

COURSE	MARK	CRED
ENGLISH 10	A	1.00
WORLD HISTORY	A	1.00
TOTAL		2.00

GRADE 11 [redacted]
1989-90 [redacted]
MEM. 180 ABS. 1 ATT. 179

COURSE	MARK	CRED
ENGLISH 11 AC	B	1.00
US VA HIST AC	B	1.00
ENR PRE-CALC	A-	1.00
COMP SCIENCE	B+	1.00
AP CHEMISTRY	B-	1.00
PHYSICS	A-	1.00
SYM BAND	A-	1.00
TOTAL		7.00

GRAND TOTAL 22.50

CURRENT SCHEDULE FOR 90-91

GPA TO DATE 3.000

COURSE TITLE	1 QTR	2 QTR	SEM	3 QTR	4 QTR	F HS
AP LANG/COMP			C+			
AP VA/US GOVT						
AP CALCULUS BC			A+			
GEOSCIENCE/GUA						
OPTICS/MOD PHY						
MATH MODEL						
[redacted]						
SYM BAND			A			

[redacted]

TEST DATE MAY 90 GRADE 11 — SAT V 700 — 65 — 73 — SAT M 800 — 60+

ADMISSIONS TESTING PROGRAM
The College Board

D

TEST DATE JUN 90 GRADE 11

ADMISSIONS TESTING PROGRAM
The College Board

ACH 1 M280 ACH 2 CH80 ACH 3 PH80

D

AP EXAM GRADES
90: CHEM 5

HIGHEST AP SCORE

[redacted]

TEST DATE JUN 90 GRADE 11

ADMISSIONS TESTING PROGRAM
The College Board

ACH 1 M280 ACH 2 CH80 ACH 3 PH8[redacted]

THREE PERFECT ACHIEVEMENT TEST SCORES (math, Physics Chemistry)

Appendix B
Applicant Essay #1

I am not perfect. In fact I'm inclined to discredit any reports of perfection in the human form, for I believe that the closest a man can come to perfection is to be in endless pursuit of his ideal. In the next fo years of my life, I will change very much, and I look forward to this wi more enthusiasm than I have ever felt before. For the first time I will be free — free of parents, condescending school officials, negative peer influences deeply entrenched stereotypes, and futile chores of tradition; in short I will finally be able to bury the middleman between myself and success. My goal in college is to find myself and improve myself; my greatest asset in this journey will be my newfound independence.

With independence comes responsibility for both failures and successes. Up to this point, many of the "failures" in my life have been the fault of circumstance, but must take much of the credit for my successes. Without imposition one has little excuse for failure, and so I long for a sense of direct responsibility because I have much confidence in myself and my own prudence. For the past seventeen year the status quo has been strangling me.

I am an intelligent, artistic, and insightful person who has spent most of his life alone. This isolation has made me who I am; it's without a doubt the single mo important factor in my development. I believe I've had just about as much solitary thought as a man can have and still be called sane — though at times I'll object to this label. My parents met, married, and I was born in a flash. Shortly thereafter they were in fact not soul mates, but mortal enemies. Their battle rages to this day, and time and time again, I am forced to be the self-sacrificing "grenade boy." Needle to say this did not instill in me a cheerful attitude. Because I am one of the few people of my station to engage in true thought, I tend to be critical of my peers; cannot help it — their blatant flaws scream at me. Don't misunderstand me; I'm really not at all arrogant. I stand eager to befriend or listen to anyone; but so far in my life, I have not found good companionship, disregarding blue moons.

Perhaps the biggest transition I'll make in the next few years is from a loner to a convivial person. No man is an island? Well, I have been so for the past seventeen year but now I wish to taste of life on the other shore.

I have determined a few goals for college, but many achievements cannot be pre dicted now. I will continue writing, painting, singing, playing la guitarra, philosophizing and drinking sacred potions in search of eternal truths. I may decide to take up the violin, become fluent in several languages, intern in my chosen job field, or any of a host of other options.

To know oneself is to love oneself, is to achieve success. Whether my degree lead me to become a doctor or an actor, my intellect, my art, and my reason will not fade. In the next few years, I'll learn much about myself and improve upon my weaknesses. This evolution, my main college goal, will not be so piquant.

Appendix C
Student/Parent Information
School Parent Information

May 1996

Dear Student and Parents,

I hope you will be willing to help me out with a research project I am doing to complete my doctoral work here at the College of William and Mary. I am interested in how certain characteristics correlate with high school gpa among students who have scored very high on the SAT I (Scholastic Assessment Test). As you can see from a quick look at the survey inventories included, the three specific characteristics include general patterns of interpersonal relations, study skills and learning strategies, and degree of potential career focus.

The time needed for you to complete these three surveys should not exceed 60 minutes. After completing them, please return them to me in the envelope provided. The participation consent form must be returned to school administrators. Please be assured that all information is strictly confidential and that no one involved in this research will be aware of your identity. Your survey responses will be correlated with your gpa through an ID number assigned by your school division counselor or administrator who will not have access to your survey results. I will not have access to how names and numbers relate.

There are no "right" or "wrong" answers to any of these surveys, so please be very candid in your responses. I hope the data I collect will be helpful in assessing needs and interests of high ability students, like yourself, in the transition from high school to college.

In appreciation for your help on this project, I would like to offer you the opportunity to be part of a drawing for a $100 "post-secondary plans" award. The post card addressed to me can be used as your raffle "ticket" if, AFTER MAILING YOUR SURVEY RESPONSES, you self-address the back and return the card to me separately. Please check the box if you would also like me to send you a synopsis of the results of my research. I anticipate there will be approximately 100 respondents to my survey. (Therefore, at least a 1 in 100 chance of winning!)

Please feel free to contact me if you have any questions about the research or survey instruments (804-221-3976 or 804-565-0851). Thank you so much for your help in my project, and best wishes as you complete your senior year of high school.

Sincerely,

Virginia A. Carey
Doctoral Candidate, Ed.D Counseling
College of William and Mary

Appendix D
Permission Form

PLEASE RETURN TO YOUR LOCAL SCHOOL SYSTEM ADMINISTRATOR

Research Participation Consent Form

I give my permission for my/my child's participation in a doctoral research project conducted by Virginia A. Carey under the supervision of the College of William and Mary faculty at the School of Education. I understand that

-data collected from me will be used and maintained anonymously and in complete confidentiality.

-I have the right to discontinue my participation at any time by notifying the appropriate local school division personnel that I no longer wish to be involved.

-I am being offered the opportunity to receive a synopsis of the results of the research.

_____

Student's Signature

_____

Signature of Parent or Legal Guardian

Appendix E
Return Response Card

CAREY
422 HEMPSTEAD RD.
WILLIAMSBURG, VA 23188

PROJECT EXCEL

VIRGINIA CAREY
422 HEMPSTEAD RD.
WILLIAMSBURG, VA 23188

Please include me in the drawings to be held on June 1 ($100) and June 15 ($50).

Name _____

Address _____

_____

_____

Phone (_____)_____

- ❑ Yes, I would like a synopsis of these research results.
- ❑ Yes, you can contact me about future studies of high ability students.

MAIL THIS CARD SEPARATELY;
DO NOT INCLUDE WITH SURVEY RESULTS.

Appendix F
School Participation Request

Mr. [redacted]
Superintendent
[redacted] County Public Schools
PO Box 10
Chesterfield VA 23832

Dear Mr. [redacted]:

Although I'm writing on office letterhead, my quest is as much personal as professional. For years I have been interested in what happens to the high ability/low achievement seniors we don't admit to our freshman class. Where do they go? How do they fare? Could some type of high school or pre-college summer intervention program have focused that academic potential so that more college options would have been available to them? Everyone in education has, at some point, been frustrated by a gifted underachiever.

I want to ask your help in a research project, related to this topic, which I am undertaking for my doctoral dissertation. Briefly stated, I want to look at certain personality and academic "style" variables, among high ability students, to document how they relate (or don't relate) to high school spa.

I am hoping [redacted] County schools may be willing to help me in two ways:

1. Identify, by January 20, how many high school seniors in your division have scored 650 or above on the math or verbal section of the SAT (or have a combined "best" set of SATs totaling 1100 or above). Also, identify the mean gpa of your graduating seniors across the division.

2. Assist me in providing these students, during the month of February, with packets of 3 survey instruments, identified only by number, SAT score, and gpa, which can be mailed back to me after the students have taken the survey at home. Strict confidentiality for students, and school divisions, will be maintained.

I would be happy to work directly with your division research or counseling specialist, but would also be willing to work with individual high school principals or directors of guidance if that is easier.

I look forward to working on an interesting project with your division, and hope you will contact me (804-221-3976) with your questions or for further details.

Thank you for your initial consideration of this request.

Sincerely,

Virginia A. Carey
Dean of Admission

Appendix G
School Roster

Participation Roster/Data Form

To Be Completed by School Personnel							Researcher Data		
M/F	Ethnic*	Pre-Assigned ID #	Highest V-SAT	Highest M-SAT	TOTAL	7th Semester gpa	AIR	Career Focus	LASSI

*NA- Native American
C- Caucasian
L- Latino/a

AfAm - African-American
AsAm - Asian American

Appendix H
AIR, Assessment of Interpersonal Relations

Assessment of Interpersonal Relations

Bruce A. Bracken

Section I. Identifying Information

Name/ID No.

Address

Parents' Name

School/Agency

Referred by

Place of testing | Tested by

Race B W Other | Spanish Origin Yes No

	Year	Month	Day	
Date Tested		/	/	Age
Date of Birth		/	/	Sex
Chronological Age		/	/	Grade

Section II. Directions and Scales

Please rate the following statements according to how well they apply to each of your parents, your male and female peers, and your teachers. Please rate each statement according to how you *honestly* feel. There are no right or wrong answers, so be sure you are honest with yourself as you rate each statement. You should rate only the parent(s) with whom you are currently living. If you rate only one of your parents (e.g., your mother, but not your father), please check the boxes to indicate the parent with whom you are not living and the reason.

I am not rating my ☐ mother ☐ father due to ☐ death, ☐ separation, ☐ divorce, or ☐ other.

Each statement should be rated as:

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

Additional copies of this form (#6672) are available from PRO-ED
8700 Shoal Creek Boulevard, Austin, Texas 78757 512/451-3246

PARENTS SCALES

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	MOTHER	MOTHER SCORE	FATHER	FATHER SCORE
1. I am really understood by my . . .	SA A D SD		SA A D SD	
2. I like to spend time with my . . .	SA A D SD		SA A D SD	
3. If I was bothered by a friend's behavior, I would tell my . . .	SA A D SD		SA A D SD	
4. I am treated fairly by my . . .	SA A D SD		SA A D SD	
5. I feel I am being used by my . . .	SA A D SD		SA A D SD	
6. When I buy things, I value the opinion of my . . .	SA A D SD		SA A D SD	
7. If I was worried about a friend doing drugs, I would talk with my . . .	SA A D SD		SA A D SD	
8. When I am lonely, I seek the company of my . . .	SA A D SD		SA A D SD	
9. I feel trust and stability in my relationship with my . . .	SA A D SD		SA A D SD	
10. My relationship is stressful with my . . .	SA A D SD		SA A D SD	
11. I am depended upon heavily by my . . .	SA A D SD		SA A D SD	
12. I can express my true feelings when I am with my . . .	SA A D SD		SA A D SD	
13. My happiness is affected by my . . .	SA A D SD		SA A D SD	
14. It is important to me that I am accepted by my . . .	SA A D SD		SA A D SD	
15. It is difficult to be myself when I am around my . . .	SA A D SD		SA A D SD	
16. My personal values are like those of my . . .	SA A D SD		SA A D SD	
Subtotal Raw Scores				

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	MOTHER	MOTHER SCORE	FATHER	FATHER SCORE
17. When I am feeling good, I like to be around my . . .	SA A D SD		SA A D SD	
18. I feel comfortable around my . . .	SA A D SD		SA A D SD	
19. If I had questions about sex, I would ask my . . .	SA A D SD		SA A D SD	
20. It is *not* easy to be honest with my . . .	SA A D SD		SA A D SD	
21. I am accepted totally by my . . .	SA A D SD		SA A D SD	
22. I am motivated to do my best by my . . .	SA A D SD		SA A D SD	
23. I am influenced most by my . . .	SA A D SD		SA A D SD	
24. When I am in trouble, I talk to my . . .	SA A D SD		SA A D SD	
25. I argue a lot with my . . .	SA A D SD		SA A D SD	
26. I am really cared about by my . . .	SA A D SD		SA A D SD	
27. I enjoy talking with my . . .	SA A D SD		SA A D SD	
28. I respect my . . .	SA A D SD		SA A D SD	
29. When I have concerns about my future, I talk to my . . .	SA A D SD		SA A D SD	
30. I am criticized most by my . . .	SA A D SD		SA A D SD	
31. I want to be like my . . .	SA A D SD		SA A D SD	
32. I feel bad when things are not going well for my . . .	SA A D SD		SA A D SD	
33. I trust the motives of my . . .	SA A D SD		SA A D SD	
34. I feel I can tell secrets to my . . .	SA A D SD		SA A D SD	
35. I frequently am disappointed by my . . .	SA A D SD		SA A D SD	
Total Raw Scores				

PEERS SCALES

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	MALE PEERS	MALE SCORE	FEMALE PEERS	FEMALE SCORE
1. I am really understood by my . . .	SA A D SD		SA A D SD	
2. I like to spend time with my . . .	SA A D SD		SA A D SD	
3. If I was bothered by a friend's behavior, I would tell my . . .	SA A D SD		SA A D SD	
4. I am treated fairly by my . . .	SA A D SD		SA A D SD	
5. I feel I am being used by my . . .	SA A D SD		SA A D SD	
6. When I buy things, I value the opinion of my . . .	SA A D SD		SA A D SD	
7. If I was worried about a friend doing drugs, I would talk with my . . .	SA A D SD		SA A D SD	
8. When I am lonely, I seek the company of my . . .	SA A D SD		SA A D SD	
9. I feel trust and stability in my relationship with my . . .	SA A D SD		SA A D SD	
10. My relationship is stressful with my . . .	SA A D SD		SA A D SD	
11. I am depended upon heavily by my . . .	SA A D SD		SA A D SD	
12. I can express my true feelings when I am with my . . .	SA A D SD		SA A D SD	
13. My happiness is affected by my . . .	SA A D SD		SA A D SD	
14. It is important to me that I am accepted by my . . .	SA A D SD		SA A D SD	
15. It is difficult to be myself when I am around my . . .	SA A D SD		SA A D SD	
16. My personal values are like those of my . . .	SA A D SD		SA A D SD	
Subtotal Raw Scores				

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	MALE PEERS	MALE SCORE	FEMALE PEERS	FEMALE SCORE
17. When I am feeling good, I like to be around my . . .	SA A D SD		SA A D SD	
18. I feel comfortable around my . . .	SA A D SD		SA A D SD	
19. If I had questions about sex, I would ask my . . .	SA A D SD		SA A D SD	
20. It is *not* easy to be honest with my . . .	SA A D SD		SA A D SD	
21. I am accepted totally by my . . .	SA A D SD		SA A D SD	
22. I am motivated to do my best by my . . .	SA A D SD		SA A D SD	
23. I am influenced most by my . . .	SA A D SD		SA A D SD	
24. When I am in trouble, I talk to my . . .	SA A D SD		SA A D SD	
25. I argue a lot with my . . .	SA A D SD		SA A D SD	
26. I am really cared about by my . . .	SA A D SD		SA A D SD	
27. I enjoy talking with my . . .	SA A D SD		SA A D SD	
28. I respect my . . .	SA A D SD		SA A D SD	
29. When I have concerns about my future, I talk to my . . .	SA A D SD		SA A D SD	
30. I am criticized most by my . . .	SA A D SD		SA A D SD	
31. I want to be like my . . .	SA A D SD		SA A D SD	
32. I feel bad when things are not going well for my . . .	SA A D SD		SA A D SD	
33. I trust the motives of my . . .	SA A D SD		SA A D SD	
34. I feel I can tell secrets to my . . .	SA A D SD		SA A D SD	
35. I frequently am disappointed by my . . .	SA A D SD		SA A D SD	
Total Raw Scores				

TEACHERS SCALE

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	TEACHER	TEACHER SCORE
1. I am really understood by my . . .	SA A D SD	
2. I like to spend time with my . . .	SA A D SD	
3. If I was bothered by a friend's behavior, I would tell my . . .	SA A D SD	
4. I am treated fairly by my . . .	SA A D SD	
5. I feel I am being used by my . . .	SA A D SD	
6. When I buy things, I value the opinion of my . . .	SA A D SD	
7. If I was worried about a friend doing drugs, I would talk with my . . .	SA A D SD	
8. When I am lonely, I seek the company of my . . .	SA A D SD	
9. I feel trust and stability in my relationship with my . . .	SA A D SD	
10. My relationship is stressful with my . . .	SA A D SD	
11. I am depended upon heavily by my . . .	SA A D SD	
12. I can express my true feelings when I am with my . . .	SA A D SD	
13. My happiness is affected by my . . .	SA A D SD	
14. It is important to me that I am accepted by my . . .	SA A D SD	
15. It is difficult to be myself when I am around my . . .	SA A D SD	
16. My personal values are like those of my . . .	SA A D SD	
Subtotal Raw Score		

Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)

	TEACHER	TEACHER SCORE
17. When I am feeling good, I like to be around my . . .	SA A D SD	
18. I feel comfortable around my . . .	SA A D SD	
19. If I had questions about sex, I would ask my . . .	SA A D SD	
20. It is *not* easy to be honest with my . . .	SA A D SD	
21. I am accepted totally by my . . .	SA A D SD	
22. I am motivated to do my best by my . . .	SA A D SD	
23. I am influenced most by my . . .	SA A D SD	
24. When I am in trouble, I talk to my . . .	SA A D SD	
25. I argue a lot with my . . .	SA A D SD	
26. I am really cared about by my . . .	SA A D SD	
27. I enjoy talking with my . . .	SA A D SD	
28. I respect my . . .	SA A D SD	
29. When I have concerns about my future, I talk to my . . .	SA A D SD	
30. I am criticized most by my . . .	SA A D SD	
31. I want to be like my . . .	SA A D SD	
32. I feel bad when things are not going well for my . . .	SA A D SD	
33. I trust the motives of my . . .	SA A D SD	
34. I feel I can tell secrets to my . . .	SA A D SD	
35. I frequently am disappointed by my . . .	SA A D SD	
Total Raw Score		

Appendix I
Career Focus Survey Instrument

DEGREE OF CAREER FOCUS SURVEY

List any career fields you are currently considering:

_____

_____

_____

Try to answer the following questions as best you can with one of the four options provided:

In planning my potential career:	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I need reassurance that I am making the right choice	____	____	____	____
2. I am concerned that my present interest may change over the next few years	____	____	____	____
3. I am very certain about the career field in which I could perform well	____	____	____	____
4. I know fairly well what my major strengths and weaknesses are	____	____	____	____
5. The careers I am considering may not pay enough to live the kind of life I want	____	____	____	____
6. If I had to make a career choice right now, I'm afraid I would make a bad choice	____	____	____	____
7. I need to find out what kind of career path I should follow	____	____	____	____
8. Making up my mind about a career has been a difficult problem for me	____	____	____	____
9. I am confused about the whole problem of deciding on a career	____	____	____	____
10. I am pretty sure that my intended career choice is right for me	____	____	____	____

(OVER)

	Strongly Agree	Agree	Disagree	Strongly Disagree
11. I don't know enough about what people really do in various occupations	____	____	____	____
12. No single career area appeals strongly to me	____	____	____	____
13. I am uncertain about what career field I would enjoy	____	____	____	____
14. I would like to increase the number of career fields I could consider	____	____	____	____
15. My estimates of my talents and abilities vary a lot from year to year	____	____	____	____
16. I am not sure of myself in many areas of life	____	____	____	____
17. I haven't begun thinking about career fields yet	____	____	____	____
18. I can't understand how some people can be so sure about what they want to do	____	____	____	____

Adapted from "My Vocational Situation" developed by John Holland, Denise Daiger, and Paul G. Power, 1980.

Appendix J
LASSI (Learning and Study Strategies Inventory)

APPENDIX J

Appendix K
Applicant Essay #2

Almost magical. As if someone had just waved a magic wand in front of my eyes, I changed from an irresponsible, indolent laggard into a hard working, determined, and confident student. All this and more, due solely to a summer camp I enrolled in between sophomore and junior year. You may ask yourself, "What did this camp do, make you really smart or something?" Although the course I took, Geopolitics, helped inform me of current events and other worldly knowledge, it wasn't the course itself, but rather the experiences outside the class that changed me.

My entire life, up until that summer, was in shambles. I lacked the most important aspect in a successful student: self confidence. Without it, I was unable to capitalize on any opportunities which appeared, for I would always be afraid of failing miserably. Having two older siblings is enough pressure to most students, but the fact that mine excelled above all their expectations overwhelmed me. When it was my turn to traverse the educational experience, it seemed like they had paved a path for me to follow, and that it was mandatory I follow it and do as well as they had. All three of us went to the same middle and high schools, so it was easy to tell how our abilities differed. At first, I was comfortable, knowing that they had already experienced what I was about to, and that they would be able to help me. However, after the first year in middle school, I realized that I had many weaknesses where they had strengths. Where I had stronger abilities in athletics and music than my brother and sister, their academic prowess easily outweighed mine. This realization launched a string of worries in myself that were caused by nagging thoughts that I wouldn't be able to do as well as they had.

That special summer, I met up with a small group of people from many different states, and we quickly became close friends. I felt completely at ease with them, and I learned to trust each and every one of them. Since we all came from different areas, we often had discussions about what we did where we lived, and how our educational lives were. When it came to my turn, I had seen the openness of everybody in the group towards the others, and so I reacted the same way. What I had been keeping inside for all those years was revealed, as I had finally found people that I could effortlessly relate to. Learning from some of the other stories that I wasn't the only one with school problems, I felt confident explaining my situation as I viewed it. They were extremely helpful in listening to my predicament, and the input I received helped me to determine exactly what the cause was for my decline, which was all the unnecessary pressure I put on myself. Neither my parents nor my brother or sister, but rather I had taken my own self-confidence away. Now it is easy to look back and say, Why didn't I just relax? But without knowing what the source of my problems was, I couldn't do anything to solve them.

If I hadn't met up with this group of amicable, but otherwise regular people, I might still be having the same problems I did in my first two years of high school. With a look at my transcript, one can see that something had a profound impact on my academic vigor very abruptly. This new-found confidence also inspired greater successes in music and athletics, and has made me a completely different person. Where before I was shy and timid, I am now more outgoing and adventurous. The change happened so suddenly that it feels like a magician just waved his wand over my head.

Vita

Virginia Anne Carey

Birthdate: April 3, 1949

Birthplace: Whidby Island, Washington

Education:

1993-1997 The College of William and Mary
Williamsburg, Virginia
Doctorate of Education, Counseling

1975-1979 The College of William and Mary
Williamsburg, Virginia
Masters of Education, Counseling

1967-1971 The College of William and Mary
Williamsburg, Virginia
Bachelor of Arts

Experience:

Dean of Undergraduate Admission
The College of William and Mary,
1992-present.

Associate Dean of Admission,
The College of William and Mary
1985-1992.

Guidance Counselor
Lafayette High School
1979-1985.