THE ROLE OF SKILLS AND STUDY BEHAVIORS IN STUDENTS OF COLOR WHO TRADITIONALLY HAVE LOW ADMISSIONS RATES TO UNIVERSITY OF CALIFORNIA

Willie J. Armstrong
B.A., University of Maryland University College, Europe, 2000
M.P.A., Bowie State University, Europe, 2002

DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

in

EDUCATIONAL LEADERSHIP

at

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

SPRING 2010
THE ROLE OF SKILLS AND STUDY BEHAVIORS IN STUDENTS OF COLOR WHO TRADITIONALLY HAVE LOW ADMISSIONS RATES TO UNIVERSITY OF CALIFORNIA

A Dissertation

by

Willie J. Armstrong

Approved by Dissertation Committee:

Geni Cowan, Ph.D., Chair

Jose Chavez, Ph.D.

Jose Cintron, Ph.D.

SPRING 2010
THE ROLE OF SKILLS AND STUDY BEHAVIORS IN STUDENTS OF COLOR WHO TRADITIONALLY HAVE LOW ADMISSIONS RATES TO UNIVERSITY OF CALIFORNIA

Student: Willie J. Armstrong

I certify that this student has met the requirements for format contained in the University format manual, and that this dissertation is suitable for shelving in the library and credit is to be awarded for the dissertation.

__________________________, Graduate Coordinator
Carlos Nevarez, Ed.D. Director

__________________________, Date
DEDICATION

This dissertation is the completion of an assignment that I was chosen to do by my Lord and Savior, Jesus Christ. I want to thank Him for His love, support, and guidance. I absolutely could not have done this without Him. For all of the single mothers raising sons on their own wondering how they will turn out, I am an example of God’s grace and work. I would like to thank my committee members Dr. Geni Cowan, Dr. Jose Chavez, and Dr. Jose Cintron for all their efforts in assisting me to complete this dissertation; my family (Caballero staff included) and friends for believing in me and encouraging me throughout this long journey. I want to also thank Dr. Dawn Williams. Thank you so much for always being there for me. You are my best friend for life. Finally, I would like to thank Alice Soria. Thank you so much for helping me complete this project and for “your support.” I could not have completed this without you. Thank you all for being obedient to His purpose.
CURRICULUM VITAE

Education:

2000  B.A. Management Studies
      University of Maryland University College
      University of Maryland European Division

2002  M.A. Public Administration
      Bowie State University
      University of Maryland European Division

Professional Employment:

1993-2003  United States Air Force

2003-2007  Legislative Assistant
           Office of Assembly Member Gene Mullin
           California State Assembly

2007-2008  Legislative Director
           Office of Assembly Member Anna Caballero
           California State Assembly

2008-Present  Chief-of-Staff
              Office of Assembly Member Anna Caballero
              California State Assembly
Abstract

of

THE ROLE OF SKILLS AND STUDY BEHAVIORS IN STUDENTS OF COLOR WHO TRADITIONALLY HAVE LOW ADMISSIONS RATES TO UNIVERSITY OF CALIFORNIA

by

Willie J. Armstrong

The purpose of this research was to explore the role of skills and study behaviors in students of color who traditionally have low admissions rates to the University of California.

According to Choy, Horn, Núñez, and Chen (2000) one of the key factors that prevent low-income students of color from being admitted to post-secondary schools is academic preparedness. One way to look at the educational preparation of students of color is to focus on study skills and study behaviors. Study skills, as it relates to this study, focused on meta-cognition, self-efficacy, time management, academic preparation, and group study.

While the admissions rates at the University of California for students of color have remained relatively the same during the Pre-Proposition 209 and Post-Proposition 209 era, the demographic makeup of California has shifted. Considering the population trend, the data indicates that not only are ethnic minority groups the majority population
in California, but also that ethnic minorities will comprise of nearly 75% of the state population by the year 2050.

The University of California is also cutting freshman enrollment and boosting out-of-state admissions to generate revenue in wake of the on-going budget cuts, which leaves fewer slots for California students. Tuition fee increases for California students will also impact working class and low-income families across the spectrum. Therefore, admission to UC for students of color is further limited.

California’s economy depends on having an educated workforce, and therefore, it is essential that these under-represented students of color gain admission to post-secondary education.

The University of California at Davis (UCD) is one of ten campuses in the University of California (UC) system. It is located in the Central Valley of California near Sacramento. UCD has the largest campus within the UC system.

The Study Behavior Inventory- High School Version (SBI-HS) was administered to 77 Fall 2009 enrolled freshmen students of color (31 African American, 18 Asian American, and 28 Hispanic/Latino) from UCD. Within the groups, at least nine were male and eight were female. Inclusion or exclusion was based on the self-identification of the student.

The quantitative findings were reported in the following manner:

- Similarities and Differences in Meta-Cognition and Self-Efficacy Among Students of Color
• Similarities and Differences in Time Management Among Students of Color
• Similarities and Differences in Academic Preparation Among Students of Color
• Similarities and Differences in Social Nature Among Students of Color

The results of this study indicated that all groups have opportunities to further develop the necessary skills and study behaviors. In fact, these skills and study behaviors can be taught. Further research should look at a skills and study behavior treatment group and one control group to see if academic improvement can be demonstrated.
# TABLE OF CONTENTS

Dedication ............................................................................................................................................. v  
Curriculum Vitae .................................................................................................................................. vi  
List of Tables ....................................................................................................................................... xiv  

Chapter  
1. INTRODUCTION .........................................................................................................................  1  
   Overview of the Study .................................................................................................................. 1  
   Proposition 209 .......................................................................................................................... 4  
   Pre-Proposition 209 .................................................................................................................... 4  
   Post-Proposition 209 .................................................................................................................... 5  
   Statement of the Problem .......................................................................................................... 6  
   Purpose of the Study ................................................................................................................... 8  
   Significance of the Study ............................................................................................................ 8  
   Research Questions ..................................................................................................................... 8  
   Theoretical Framework .............................................................................................................. 9  
   Methodology .............................................................................................................................. 10  
   Limitations and Assumptions ................................................................................................... 10  
   Definitions of the Study ............................................................................................................. 10  
   Organization of the Remainder of the Study .......................................................................... 11  

2. REVIEW OF THE RELATED LITERATURE ............................................................................ 12  
   Study Skills, Study Behaviors, and Academic Achievement .................................................. 13  
   Teaching Study Skills and Study Behaviors ............................................................................ 16  
      Cognitive modeling .................................................................................................................. 16  
      Meta-cognition ......................................................................................................................... 17  
   Study Skills and Study Behavior Interventions ....................................................................... 18  
   Bandura’s Social Cognitive Theory ........................................................................................... 19  
   Self-Regulated Study Skills and Study Behavior ................................................................. 20  

Recommended Study Skills and Study Behaviors for Self-Regulated Learners ..........25
Time Management ......................................................................................................26
  Making time for assignments .............................................................................28
  Creating a plan for study ...............................................................................29
  Goal setting ......................................................................................................29
  Self-drowning ..................................................................................................30
  Low frustration ...............................................................................................31
  Hostility towards others ..................................................................................31
Studying in Groups .................................................................................................33
Goal Orientation .....................................................................................................43
Self-Efficacy .........................................................................................................44
Self-Efficacy vs. Self-Esteem ...............................................................................47
Self-Efficacy, Study Skills, Study Behaviors, and Academic Achievement ..........48
Self-Efficacy and the Individual Student ...............................................................48
Self-Efficacy and Peers .......................................................................................52
Self-Efficacy and the Environment ......................................................................54
Study Behavior Inventory-High School Version (SBI-HS) .....................................55
3. METHOD ................................................................................................................57
  Quantitative Subjects ........................................................................................57
  Instrumentation ..................................................................................................59
  Procedures ..........................................................................................................60
4. INTRODUCTION .................................................................................................. 62
  Quantitative Findings ........................................................................................62
  Similarities and Differences in Meta-Cognition and Self-Efficacy among Students of
  Color ..................................................................................................................62
    Meta-cognition ..................................................................................................62
    Self-efficacy ......................................................................................................65
  Similarities and Differences in Time Management among Students of Color ........67
    Procrastination .................................................................................................68
Planning for study ................................................................. 68
Prioritization of time ............................................................. 69
Similarities and Differences in Academic Preparation among Students of Color ...... 70
Teacher assistance ................................................................. 70
Learning strategies ................................................................. 71
Additional learning strategies .................................................. 71
Proofreading .............................................................................. 72
Organization .............................................................................. 72
Similarities and Differences in Social Nature among students of Color ............ 73
Interpretation of Findings ........................................................... 74
Similar Skills and Study Behaviors among Students of Color ............................... 74
Meta-cognition and self-efficacy .................................................. 74
Time management .................................................................... 75
Academic preparation ............................................................... 75
Group studying .......................................................................... 76
Differences in Skills and Study Behaviors among Students of Color ....................... 76
Meta-cognition and self-efficacy .................................................. 76
Time management .................................................................... 76
Academic Preparation ............................................................... 77
Group Studying .......................................................................... 77
5. SUMMARY AND CONCLUSIONS .................................................. 78
Summary ................................................................................. 80
Meta-Cognition and Self-Efficacy .................................................. 80
Time Management ..................................................................... 81
Academic Preparation ............................................................... 82
Social Nature ............................................................................. 83
Researcher Reflections ............................................................... 83
Suggestions for Further Research .................................................. 84
Conclusion ................................................................................. 85
6. APPENDICES .......................................................................................................................... 87
   Human Subjects Protocol................................................................................................. 88
   Consent to Participate in Research .................................................................................. 90
   Online Survey .............................................................................................................. 91
REFERENCES ...................................................................................................................... 103
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. University of California Admissions rates by Ethnic Group Prior to Proposition 209 and Following Proposition 209</td>
<td>6</td>
</tr>
<tr>
<td>3. UC Davis Participant Demographic Data</td>
<td>59</td>
</tr>
<tr>
<td>4. Aggregate Mean Responses to Meta-Cognition and Self-Efficacy among Students of Color Summarized</td>
<td>67</td>
</tr>
<tr>
<td>5. Aggregate Mean Responses to Time Management among Students of Color Summarized</td>
<td>70</td>
</tr>
<tr>
<td>6. Aggregate Mean Responses to Academic Preparation among Students of Color Summarized</td>
<td>73</td>
</tr>
<tr>
<td>7. Aggregate Mean Responses to Social Nature among Students of Color Summarized</td>
<td>74</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Overview of the Study

For several decades, there has been an educational achievement disparity among racial, ethnic, and socio-economic categories of identification that has remained consistent. This pattern sustains itself throughout standardized test scores and college admissions rates (Snyder, Tan, & Hoffman, 2006). Moreover, it is common to find educational achievement disparity reports that focus on the gap between African American, Latino and Caucasian students. While it is important to look at the educational achievement of these particular ethnic groups and their identification categories compared to their Caucasian counterparts, it is also imperative to look at the educational preparation of African American and Latino students compared to other students of color for post-secondary education. One way to look at the educational preparation of students of color is to focus on study skills and study behaviors.

According to Choy, Horn, Núñez, and Chen (2000) one of the key factors that prevents low-income students of color from being admitted to post-secondary schools is academic preparedness. A report by the California Department of Education entitled Closing the Achievement Gap (2008) revealed that among California’s student subgroups about twelve of every 20 white students in grades two through eleven were proficient in English-language arts on the 2006 statewide test compared with fewer than six of every 20 African American, Latino, or economically disadvantaged students. Additionally, although nearly two-thirds of Asian students and more than half of white students were
proficient in mathematics in 2006, only five of every 20 African American students and six of every 20 Latino students met math state standards.

While the problem of achieving academic success has been tied to many factors, one important variable has been found to be study skills and study behaviors (Ramist, 1981). There are school programs that modify the study skills and study behaviors of students of color to ensure educational achievement. Mehan, Hubbard, and Villanueva (1994) cited the success of an initiative in the San Diego, California, public schools-Advancement Via Individual Determination (AVID) program, which places high-potential/low-performance students in classes with their high-achieving peers. The AVID students meet daily to receive tutoring support and note taking skills in high school. The AVID program also includes an elective class that focuses on writing, inquiry, and collaboration. Tutors are available to students and academic expectations placed on students in the program are high. The rates of high school completion and college going for these students exceed local and national averages.

Viewed as academic enablers, effective study skills and study behaviors function as critical learning tools. According to Bliss and Mueller (1987) there is often confusion between the terms “study skills” and “study behaviors.” They described the difference in the following way:

Study skills are the potentials for action while study behaviors are the observed actions, themselves. A student may have all the skills required, that is he or she may be able to take good notes in class [possession of a study skill] but simply sits in class doodling [the lack of a study behavior] (p. 16)
The University of California (UC) is one of the state’s post-secondary public institutions. Given California’s demographical makeup and the proportion of admissions among students of color, there needs to be a cross-cultural assessment of the study skills and study behaviors of the admitted students of color at UC. The rationale for this importance is evident when assessing previous and current admissions rates of students of color at UC. First, there should be a brief explanation of California’s higher education framework.

The California Master Plan of 1960 is a living document that governs admittance eligibility for the three higher education public institutions in California. The University of California is the primary academic research institution in the state. The top 12.5 percent of high school graduates are eligible for entry. UC awards undergraduate, graduate and professional degrees.

The California State University (CSU) selects the top one-third of high school graduates. CSU awards undergraduate and graduate degrees. Additionally, CSU currently awards the doctorate in Educational Leadership (Ed.D). California Community Colleges (CCC) are open to anyone capable of benefiting from instruction. Most students are encouraged to enter CCC for the first two years of higher education because of the cost savings not only to the student, but also to the state (Douglass & Greenspan, 2005). In order to understand the current rates of admission for students of color into the UC, there must be a brief discussion of admissions rates before Proposition 209.
Proposition 209

The University of California (UC) is one of the state’s post-secondary public institutions. Currently, University of California is experiencing severe budget cuts. The number of California student admissions is decreasing while out-of-state admissions are increasing. The admissions rate for students of color has been traditionally low and with limited enrollment for California residents, competition to get into UC will be intensified. The appropriate skills and study behaviors may enhance a student’s changes of getting into University of California. In order to understand this rationale, there should be a brief explanation of California’s higher education framework.

Pre-Proposition 209

The Student Academic Services at UC issued a report entitled Undergraduate Access to the University of California After the Elimination of Race-Conscious Policies (Robinson, 2003) which noted that during the 1970s and 1980s, UC pursued an aggressive program to provide access to all of California’s high school students. As long as a student met the necessary eligibility requirements for admission, which included college preparatory courses, required grades in those courses, and admission test scores, then the applicant could apply to a single campus within the UC system and had strong consideration for admission (Robinson, 2003).

By the mid-1980s, several UC schools could not accept all UC-eligible applicants and therefore, began re-directing students to other UC schools. During the Fall of 1986 that UC began allowing students to submit one single application, which could be distributed to multiple UC schools, but with separate consideration.
Post-Proposition 209

Supporters of Proposition 209 have argued that the proposition was called the “California Civil Rights Initiative” because it ended quotas and preferences. Opponents of Proposition 209 have continued to argue that the proposition eliminated programs that helped students with tutoring, mentoring, outreach, recruitment, and counseling in order to increase access to higher education. Additionally, opponents felt that Proposition 209 only made access to higher education worse (Legislative Analyst Office, 1996).

Considering the admissions rates (as shown in Table 1 below) for UC during Pre-Proposition 209 and Post-Proposition 209 periods, the data shows that African Americans declined slightly after the initial implementation of Proposition 209, but have risen back to Pre-Proposition 209 admission rates. Chicano/Latino students have not only risen to Pre-Proposition 209 levels, but also exceeded those levels. Chicano/Latino student admissions rates for the past two years have been over 20%. Asian/Pacific Islander/Filipino admissions rates have remained consistent around 33-35% during Pre- and Post-Proposition 209 periods. Finally, since the passage of Proposition 209, Caucasian student admissions have continued to decline; however, these students are still being admitted at a rate over 33%. While the admissions rates for students of color have remained relatively the same, the demographic makeup of California has shifted during the Post-Proposition 209 era.
Table 1

*University of California Admissions rates by Ethnic Group Prior to Proposition 209 and Following Proposition 209*

<table>
<thead>
<tr>
<th></th>
<th>AA</th>
<th>Chicano/Latino</th>
<th>AFPI</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4%</td>
<td>4%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>3%</td>
<td>4%</td>
<td>33%</td>
<td>34%</td>
</tr>
</tbody>
</table>

*Note.* University of California, 2009. Adapted with permission of the author.

**Statement of the Problem**

Considering the population trend (as shown in Table 2 below) by the State of California, Department of Finance (2009) the data indicates that not only are ethnic minority groups the majority population in California, but also that ethnic minorities will comprise of nearly 75% of the state population by the year 2050. Adversely, admissions rates have been relatively consistent during Pre-and Post-Proposition 209 terms and with the population shifting, the under-represented students of color in UC are the majority of the California population.

The University of California is also cutting freshman enrollment and boosting out-of-state admissions to generate revenue in wake of the on-going budget cuts, which leaves fewer spots for California students. Tuition fee increases for the California students will also impact working class and low-income families across the spectrum. Therefore, admission to UC for students of color is further limited.
Table 2

*State of California Race/Ethnic Population with Age and Sex Detail, 2000-2050*

<table>
<thead>
<tr>
<th>Year</th>
<th>AA</th>
<th>Chicano/Latino</th>
<th>AFPI</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>7%</td>
<td>32%</td>
<td>11%</td>
<td>47%</td>
</tr>
<tr>
<td>2050</td>
<td>5%</td>
<td>52%</td>
<td>14%</td>
<td>26%</td>
</tr>
</tbody>
</table>

*Note.* State of California, Department of Finance, 2009. Adapted with the permission of the author.

According to Mortenson (2005) over a 40-year working life (ages 25-64), it is estimated that earnings for a bachelor’s degree recipient will be $900,000 more than for someone with a high school diploma. On an annual basis, the typical full-time year-round worker with a bachelor’s degree earns an average of $50,900 a year, while those with a high school diploma earn $31,500 (Baum & Ma, 2007). Therefore, since California’s economy depends on having an educated workforce, it is essential that these under-represented students of color gain admission to post-secondary education as they are the majority of the state population. As mentioned previously, one of the key factors that prevent under-represented students of color from gaining access to higher education is educational preparedness.

Gersten (1998) highlighted that the majority of students experiencing academic difficulties are not cognizant of the various study skills and study behaviors employed by their academically competent colleagues. Therefore, the clearly at-risk students may experience academic difficulties not due to a lack of ability, but rather due to the lack of effective study skills and study behaviors.
Purpose of the Study

The purpose of this study was to explore the role of skills and study behaviors in students of color who traditionally have low admissions rates to the University of California.

Significance of the Study

This study was designed to provide information to students, educators, decision makers, and school administrators for the purpose of understanding student needs, which can be used to plan for subsequent program development for the entire student body, not just those in academic difficulty.

California has a three-tiered post-secondary educational system. As mentioned previously, UC takes the top 12.5% of high school graduates. This research focused on cross-cultural “best practices” skills and study behaviors of those students of color admitted to the UC. This should contribute to the body of knowledge because this provides a better understanding of how this population of students of color got admitted to UC. Additionally, educational leaders can use this information to not only facilitate greater academic achievement among students of color, but also increase rates of admission for students of color to the University of California.

Research Questions

How does the profession increase under-represented students of color admissions into the University of California? In order to arrive at that understanding, this study will explore the following questions:
• What are the study skills and study behaviors of the admitted freshmen students of color at UC Davis?
  o What study skills and study behaviors are similar?
  o What study skills and study behaviors are different?

Study skills as it relates to this study focuses on meta-cognition, self-efficacy, time management, academic preparation, and group study.

Theoretical Framework

While viewed as academic enablers, effective study skills and study behaviors function as critical learning tools. Effective studying involves a number of coordinated cognitive skills and processes that enhance the efficiency of student learning along with the application of necessary activities and behaviors (Young, 2002). Indeed, the knowledge and application of effective study skills and study behaviors have long been associated with overall academic achievement, but these effective study skills and study behaviors often need to be explicitly taught to many students (Gettinger & Seibert, 2002). This study will use Bandura’s Social Cognitive Theory to explain learning and behavior (Bandura, 1989).

According to Zimmerman (1994) behavioral self-regulatory strategies are those behaviors the student engages in to promote academic goals for example, reviewing class notes, checking work before turning it in, or reviewing possible test questions. Social Cognitive Theory provides an explanation of self-regulated study skills and study behaviors, learning goal orientation, performance goal orientation, levels of self-efficacy,
perceived future consequences, and persistence behaviors (Bandura, 1997; Zimmerman, 1989). These will be discussed in greater detail in Chapter 2.

**Methodology**

This study used a quantitative methods approach. A quantitative Study Behavior Inventory-HS (SBI-HS) by Bliss (2002) was used, which encompasses a Likert scale where students can do the following: rarely or never true in my case, sometimes true in my case, often or usually true in my case, always or almost always true in my case.

**Limitations and Assumptions**

The following limitations and/or assumptions exist in this study:

1. This study will be limited to the admitted freshmen at UC Davis, thereby limiting the generalization of the data.
2. University of California does not provide individual admissions statistics of all Asian and Hispanic groups. Asian Pacific Islander (API) represents the Asian group.

**Definitions of the Study**

For the purposes of this study, the following terms will be used operationally with these definitions:

_African American_. Includes Black/African American (University of California, 2009).

_Asian American_. Includes Chinese/Chinese-American, East Indian/Pakistani, Japanese/Japanese-American, Korean, Pilipino/Filipino, Polynesian/Pacific Islander,
Vietnamese, and Other Asian/Thai. Thai, Cambodian, and Laotian are included in “Other Asian.”

*Chicano/hispanic/latino*: Includes Chicano/Mexican American OR Latino/Other Spanish American.

UC Davis Freshmen: Participants self-indicated that it was their first year in a degree program on the UC Davis Campus.

*Organization of the Remainder of the Study*

Chapter 2 includes a thorough review of the relevant literature. This review examines Social Cognitive Theory and its elements. Chapter 3 includes an explanation of the research methodology used in this study. The researcher defines the research terminology and presents a detailed explanation of how research methods are to further elucidate the study and its components. Chapter 4 presents the findings of the study, and Chapter 5 presents conclusions and recommendations for future research.
Chapter 2

REVIEW OF THE RELATED LITERATURE

According to Choy, Horn, Núñez, and Chen (2000) one of the key factors that prevented low-income students of color from being admitted to post-secondary schools was academic preparedness. One way to look at the educational preparation of students of color is to focus on study skills and study behaviors.

A report by the California Department of Education entitled Closing the Achievement Gap (2008) revealed that among California’s student subgroups about twelve of every 20 White students in grades two through eleven were proficient in English-language arts on the 2006 statewide test compared with fewer than six of every 20 African American, Latino, or economically disadvantaged students. Additionally, although nearly two-thirds of Asian students and more than half of white students were proficient in mathematics in 2006, only five of every 20 African American students and six of every 20 Latino students met the state standards for mathematics.

A number of researchers have shown that there were weak study skills and study behaviors among students experiencing learning difficulties (Henley, Ramsey, & Algozzine, 1996; Hoover & Patton, 1995; Ley & Young, 1998; Strichart, Mangrum, & Iannuzzi, 1998; Waldron & McLeskey, 2000). In fact, according to Gersten (1998) the majority of students experiencing academic difficulties were not cognizant of the various study skills and study behaviors utilized by their academically competent colleagues. Therefore, the clearly at-risk students may experience academic difficulties not due to a lack of ability, but rather the lack of effective study skills and study behaviors.
Viewed as academic enablers, effective study skills and study behaviors function as critical learning tools. According to Bliss and Mueller (1987) there is often confusion between the terms “study skills” and “study behaviors.” They described the difference in the following way:

Study skills are the potentials for action while study behaviors are the observed actions, themselves. A student may have all the skills required, that is he or she may be able to take good notes in class [possession of a study skill] but simply sits in class doodling [the lack of a study behavior]. (p.16)

This literature review begins with Study Skills, Study Behaviors, and Academic Achievement and also explores the concept that study skills and study behaviors can be taught. Then, this researcher uses Social Cognitive Theory, which identifies methods to transform or modify behavior, particularly as it relates to study skills and study behaviors. Finally, it continues with an in-depth examination of the various elements of Social Cognitive Theory including: self-regulated study skills and study behaviors, learning goal orientation, performance goal orientation, levels of self-efficacy, perceived future consequences, and persistence behaviors.

**Study Skills, Study Behaviors, and Academic Achievement**

Jones, Slate, Perez and Marini (1996) reported that there is a positive relationship between study skills, study behaviors, and academic success. This relationship revealed itself through achievement, which they defined as the comparison of individual performance and accountability standards. The academic comparison is presented as early as elementary school, when some achievement measurements are taken. In order for
achievement to take place, the individual must possess the following traits: knowledge of subject, application of the skill, and determination (Ryan, Connell & Grolnick, 1992).

According to Everson, Weinstein and Laitusis (2000) self-regulated learners take it upon themselves to establish a protocol for their thinking process, organization, and study behavior. These academic achievers have a repertoire of goal-specific strategies and execute them in a methodical sequence. Ultimately, these learners take responsibility for their own learning (Gettinger & Seibert, 2002).

Several studies have examined the relationship between students’ study skills, study behaviors, and their academic achievement (Elliott, Godshall, Shrout & Witty, 1990; Lammers, Onwuegbuzie & Slate, 2001). For example, in a study by Elliot, Foster and Stinson (2002), the college students who used multiple study behaviors, including outlines, flash cards, and summarization, were able to retain and recall information and material better than those students who only used notes. Elliott et al. (1990) concluded that the use of these multiple study skills and study behaviors contributed to student achievement.

Additionally, Elliott et al. (1990) reported that students and teachers could benefit from further instruction in study skills and study behaviors concerning effective organization and use of class notes.

Pressley and Afflerbach (1995) established a comprehensive list of strategies and cognitive processes that students execute individually and while participating in study groups in order to comprehend and retain information.
According to these researchers, a verbal protocol for reading is a verbal report method in which readers identify and discuss strategies that they used before, during, and after reading. They identified the following key study skills and behaviors that were evident in the majority of verbal protocols they reviewed:

(a) getting an overview before reading
(b) looking for important information and paying greater attention to it
(c) activating and using prior knowledge
(d) relating important points to study group members
(e) changing strategies when understanding is not good
(f) monitoring comprehension (Pressley & Afflerbach, 1995, p. 35)

In another study by Zimmerman and Martinez-Pons (1986) high academic achievers reported using 13 or 14 listed study strategies more than twice as often as low achievers. The self-reported use of study skills and study behaviors correlated with homework completion and standardized achievement test performance. Zimmerman and Martinez-Pons concluded that homework completion was directly related to test performance. Completing homework had a direct affect on the students’ self-awareness of their preparedness in class and of the quality of their work.

According to Pajares (2002) it is a student’s belief about him or her self as well as the academic capabilities that help to determine what will become of the knowledge and skills they have learned; their academic performances are, in part, the result of what they come to believe they have accomplished and can accomplish. Study skills and study behaviors can be manifested from that belief.
Teaching Study Skills and Study Behaviors

In order for the relationship between academic achievement and the use of appropriate study skills and study behaviors to be optimum, educators must alter the level of students’ use of these skills and behaviors (Horner & Shwery, 2002). Even if educators find it difficult to teach students to use more appropriate study behaviors, the relationship between study skills, study behaviors, and achievement would serve as an identifier of at-risk students who might be experiencing academic difficulties. However, this relationship would be much more useful if there were some intervention programs that could be used to remediate the problem.

Recent work by Elliot, Foster and Stinson (2002) and Gettinger and Seibert (2002) have demonstrated that appropriate study skills, study behaviors, and other self-regulatory behaviors can be taught both to high school and post-secondary students. Educators can use the following instructional strategies for self-standing activities or integration into other learning activities:

- Cognitive modeling
- Meta-cognition
- Study Skills and Study Behavior Intervention

Cognitive modeling. Cognitive modeling is a form of instruction that educators use to expose students to solving problems via the expert’s way of thinking (Gorrell & Capron, 1990). Schunk (1981) indicated that poorly performing mathematics students have benefited from cognitive modeling and guided performance by observing problem solving and being afforded explanations of the processes, which increased students’
When students are provided modeling, corrective feedback, performance guidance, and instruction in how to engage in self-directed mastery, their self-efficacy rises and skills development is encouraged (Bandura, 1977).

Meta-cognition. Ormrod (2000) defined meta-cognition as students’ knowledge and beliefs regarding their own cognitive processes as well as their attempts to regulate their cognitive processes to maximize learning and memory. Additionally, knowing how to study is a skill that must be taught to students. Ormrod listed the following metacognitive study strategies as effective:

- Monitoring comprehension
- Summarizing
- Note taking
- Good Organization Skills
- Identifying important information
- Retrieving prior knowledge, and
- Being motivated (Ormrod, 2000, p. 196)

These study strategies can enhance cognitive processing, which increases students’ academic performance.

According to Perkins (1995) the more information students have in reference to effective learning strategies, the greater their meta-cognition awareness will be. If a student with poor academic performance is aware of how he or she learns and how to control the learning process, this student can improve academically (Zimmerman, 1995).
When discussing study skills and study behavior interventions, research shows that educators administering a first-year study skills course can improve academic achievement. In fact, in a study by Cone and Owens (1991) a multi-test orientation inventory was administered to 250 first year students. The investigation showed that students who attended a study skills course performed better academically.

Research by Bliss and Mueller (1987) demonstrated that college students who are placed in college preparatory courses often do not demonstrate appropriate study skills and study behaviors. Moreover, Bliss and Mueller recommended that activities that teach the correct study habits such as time management, note taking, and examination taking techniques should be given to students. Finally, these researchers suggested that a strong counseling component focusing on students’ feelings of self-worth and competence should be included as part of the overall intervention process.

Supplemental Instruction (SI) is another approach that educators use to teach students appropriate study skills and study behaviors. This method, particularly used for mathematics and science courses, is designed to improve academic performance by using a combination of cooperative and collaborative learning strategies (Martin, Lorton, Blanc & Evans, 1977).

While research has shown a direct relationship between study skills, study behaviors, and academic achievement, in addition to the fact that it can be taught, Social Cognitive Theory identifies methods to transform or modify behavior, particularly as it relates to study skills and study behaviors.
Bandura’s Social Cognitive Theory

There is a distinct correlation between study habits and study behaviors. Bandura’s Social Cognitive Theory (1989) is often the theoretical template for explaining the relation connecting students’ behavior and academic achievement. The origin of this theory derives from Social Learning Theory and focuses on predicting and understanding individual and group behavior. A triangulation of interaction exists between behavior, environment, and personal beliefs. These three variables are elaborated in greater detail (Bandura, 1989).

According to Bandura (1986) behavioral factors are the individual options the student engages in that influence not only the individual, but also his or her environment. The environmental factors are the situations that students find around themselves influencing them and their behavior, and personal factors are beliefs, which impact the individual and his/her behavior.

From his research, Bandura (1989) concluded the following as it relates to study skills and study behaviors:

- High achieving students are in control of their behaviors, their environment, and their thoughts.
- The environment can be modified through behavior.

According to Gredler and Schartz (1997) a student’s success is the effect of one’s ability to control his or her behavior and the environment. These researchers define self-efficacy as the psychological variable that measures a student’s confidence in controlling his or her behavior and environment.
Social Cognitive Theory supporters embrace the idea of self-efficacy as an integral part that affects self-regulated study behavior and learning. Additionally, Zimmerman (1989) determined that students’ self-efficacy perceptions have a direct relationship to their use of learning strategies and self-monitoring.

Zimmerman (1994) referred to the ability to take control of one’s learning, including changing aspects of one’s behavior, as self-regulatory learning. The behavioral aspects of self-regulatory strategies as they relate to education are those behaviors the student engages in to promote academic goals. The following are examples of self-regulatory strategies: reviewing class notes, checking work before turning it in, or reviewing possible test questions. The self-regulated student typically finds a way to learn the material.

Researchers use Social Cognitive Theory as a way to explain learning and behavior. This theory provides an explanation of self-regulated study behaviors, learning goal orientation, performance goal orientation, levels of self-efficacy, perceived future consequences, and persistence behaviors (Bandura, 1997; Zimmerman, 1989). The next section elaborates on these elements.

Self-Regulated Study Skills and Study Behavior

According to Strickland and Burgess (1965) G. Stanly Hall was one of the early theorists of self-regulation. Hall believed that secondary teachers should allow students to independently use their minds for organizing instructional content and new knowledge in ways already learned in the primary grades.
While teaching at John Hopkins University, Hall instructed John Dewey, who is credited with leading the Progressive education movement. This child-centered movement regarded students as active learners that are responsible for their own actions. These active learners demonstrated this responsibility through self-regulated study skills and study behaviors such as discipline (Strickland & Burgess, 1965).

Dewey (1944) defined discipline as the “Mastery of the resources available for carrying through the action undertaken and to know what one is to do and to move to do it promptly” (p. 129). Therefore, the notion is formed that self-regulation concerns behavior and certain behaviors are best cultivated by practice.

According to Luria (1961) self-regulation is the way in which students evaluate and adjust their own thinking and learning processes to achieve academic success. Luria concluded that during primary years, student behavior is highly regulated by verbal instruction from others. However, based on what they experience later in life, a shift occurs where students self-instruct and self-regulate their behavior.

Vygotsky (1962) indicated that *inner speech* (the thoughts that are in one’s head) serves as a vehicle of self-direction, which manifests itself through self-regulated behaviors. Loranger (1994) noted that students who practice specific self-regulated study skills and study behaviors alone or in combination have the keys for both learning how to learn and achieving academic success.

Bandura (1977) was the first to draw attention to the connection between self-regulatory practices and self-efficacy beliefs by developing a social cognitive theory of human functioning.
Bandura concluded that most individuals possess the following characteristics:

- Potential to be self-organizing
- Proactive
- Self-regulating rather than being reactive and shaped by external events

The human instinct to exert control over the events that influence the quality of life determines the perceived self-efficacy. Bandura (1997) stated that “people are increasingly adapting the environment to themselves rather than just adapting themselves to the environment” (p. viii). Bandura concluded that control is an integral part in human lives, and a person’s level of motivation and actions are based more on what they believe is true rather than what is objectively true.

According to Zimmerman (1990) people have the capacity to develop skills to regulate the motivational and social determinants of their intellectual functioning. In other words, students need to evaluate, choose, and develop environmental settings that are conducive to learning. When students develop a regular schedule and choose a place to study and do written homework, there’s a greater chance that the homework will get done because they have developed these self-regulatory study skills.

Zimmerman (1989) provided a template for examining college student success. He concluded that students’ learning behaviors influence their environment through self-regulation, and to meet the necessary characteristics of a self-regulated learner, students must use specific learning strategies to achieve academic objectives.

Students are considered to be self-regulated learners when they establish the most favorable conditions for learning and eliminate obstacles or distractions that obstruct the
learning process. For example, a self-regulated student who believes in his or her self-efficacy sets academic goals and reaches higher levels of academic achievement.

Simmons (1996) conducted a study to assess students’ beliefs about the cause of academic failures, self-efficacy, orientation toward learning and performance goals, and use of study strategies. The study analyzed the beliefs and attitudes that 100 low-achieving college students and 200 college students in good academic standing have about themselves as learners. Simmons’ results showed that low achieving students attributed failure to lack of effort and appropriate study skills. However, the attribution of failure to ability was positively related to the use of good study strategies.

According to Pressley and Wharton-McDonald (1997) when students self-regulate their study skills and study behaviors, they tend to improve academically. For example, when a self-regulated student has an exam, the student does the following study skills and study behaviors:

- Sets goals and an action plan preparing for the exam
- Monitors his or her understanding of the required material
- Uses a variety of learning strategies
- Takes breaks when his concentration is diminishing
- Changes the learning environment when it is distracting
- Asks the instructor for assistance when needed.

Horner and Shwery (2002) identified self-regulated students as those learners who set realistic goals, use realistic strategies, monitor their understanding of the reading, and who evaluate progress toward their goals. Gettinger and Seibert (2002) described self-
regulation as initiative, persistence, and goal setting. Students who develop and use these behaviors perform academically better than students who do not. Additionally, Gettinger and Seibert (2002) concluded that this proficiency influences their choices of literature, their motivation to read, and their overall reading achievement. Byrnes (2000) concluded that increased student achievement leads to positive self-efficacy, which refuels the desire to learn through self-regulation.

Bandura (1997) concluded that self-motivation and self-regulation evolve from cognitive activity. It is a person’s forethought that brings the projected future into the present time. Therefore, those future aspirations are then transformed into motivators and regulators of behavior. Students adopt certain goals and then respond for the sake of realizing those goals. These students who desire academic achievement exhibit these self-regulatory mechanisms by practicing appropriate study skills and study behaviors.

According to Gohm, Humphreys and Yao (1998) practicing effective study skills and study behaviors are also associated with positive outcomes across multiple academic content areas. Wood, Motz and Willoughby (1998) compared university students’ perception of their study skills and study behaviors in high school with their college level study skills and study behaviors. The researchers found that university students felt that their first experiences with instruction in using effective study behaviors occurred during high school.

Tillery and Kildegaard (1973) investigated the relationship of a variety of high school seniors’ study skills, study behaviors, and beliefs and found that self-regulation was positively linked with work ethic ideals. A positive work ethic for these seniors
included completing all class work and homework assignments. These students reported that positive work ethics were the following:

- Attending school regularly
- Completing all assignments to the best of their abilities
- Asking for help when needed

Burke (2002) concluded that practicing effective study skills and study behaviors is beneficial for all learners to include: students who are at risk, students with mental learning disabilities, students who are gifted, and those that are deaf.

**Recommended Study Skills and Study Behaviors for Self-Regulated Learners**

Simpson and Nist (2000) reported that students must not only possess a variety of learning strategies, these self-regulated learners must transform these strategies into effective study skills and study behaviors. For example, when students are assigned a paper, self-regulated students proceed to seek out appropriate information for their papers, organize the information they collect, and write the paper (Pressley & Afflerbach, 1995). According to Bliss (2002) effective self-regulated study skills and study behaviors involved proofreading work before it was handed in, correcting errors in writings, tests, and homework, and organizing notes chronologically or in the order of importance. Additionally, Bandura (1997) advocated for condensing, paraphrasing, and synthesizing relevant information for future use.

Loranger (1994) conducted a study assessing the study skills and study behaviors of high school students. Loranger (1994) believed students should spend time at home revisiting the things they learned in each class with material from previous days. The
researcher found that the effective self-regulating students were the ones who were motivated to succeed and who used learning strategies such as note taking, summarizing, and outlining to accomplish their goal. Conversely, the least successful students lacked self-knowledge of their inefficient study skills and study behaviors. According to Loranger, since students do not realize that they need to learn effective study skills and study behaviors no self-regulatory behaviors are enacted. This leads, in turn, to low achievement and failure.

Cohn (1979) reported that another study skill worth noting is the ability to find the main idea of a passage. The main idea in passages is an important study skill to have because this skill is used on federal, state, and local accountability tests. According to Pressley and Afflerbach (1995) the successful learner understands the components of the message and the context for which it is given. Once again, the self-regulated learner finds a way to meet his or her goals. One way is to practice study skills and study behaviors. Finding the main idea of a paragraph is vital for academic preparation and this particular study skill can be taught in school, practiced in class, and reinforced through homework.

Time Management

According to Knapp (1972) time management was another integral part of study behaviors. While students may possess the requisite study skills and study behaviors, if adequate time is not set aside, then having those skills and behaviors are irrelevant.

Zigmond (1990) noted that while students may have had a more nurturing environment during the primary years where instruction and behavior were dictated, when students enter the ninth grade, they are immediately faced with not only absorbing
new information, but also trying to develop the appropriate study skills and study behaviors, including time management. Additionally, Zigmond reported that many ninth grade teachers acknowledged that incoming students have limited understanding about how to manage their time. High school students must understand the importance of managing their own time.

Starke (1997) concluded that many students entering college do not have strong time management skills. One of the primary reasons that many first-year students do not succeed is due to lack of time management skills. Students may have been able to succeed in high school without practicing effective time management because the homework assignments were lighter, it was less competitive among peers, or their time was managed for them. In college, however, the assignments are heavier and competition from peers is tougher. Additionally, in college, many courses do not meet everyday as they may have in high school, instructors may not take attendance, and college administrators will not send a note home to parents when students are absent. Many first-year students fail or drop out of college because they have not developed an effective time management system.

According to Van Blerkom (2002) unlike high school students who are in class for almost thirty-five hours a week, most college students are in class for only twelve to fifteen hours a week. To a college freshman, this may seem like a breeze. However, in college, most of your work must be completed outside of class. Good time management skills can actually save time. A few minutes each week spent on planning can make a real difference in how study time is organized and spent. The first rule of good time
management is: Do not let time manage you; you must learn, instead, to manage your time.

According to Nicaise and Gettinger (1995) all too often students succumb to distractions such as television, friends, work, family, music, daydreaming, or poor concentration. Succumbing to these distractions lead to academic failure and generate low self-efficacy.

Butler and Hope (1995) described symptoms of poor time management to include a sense of being rushed and hurried, being consistently late, feeling a lack of motivation, feeling the need to always try to catch up, feeling irritated and impatient, not getting assignments or goals done, being indecisive, and always procrastinating. Butler and Hope concluded the following:

- The central principle of time management is for students to spend their time doing those things that help them achieve their goals.
- Most students with poor time management admit to spending a great deal of time involved in activities which they neither value nor help them to achieve their goals.
- Students with poor time management are unclear about their values and goals.
- Students demonstrating poor time management fail to (1) set aside time for assignments, (2) do not create a plan for study, and (3) do not follow through with established benchmarks or goals.

*Making time for assignments.* Sigman (1992) noted that identifying how much time you have available for study is a critical step for efficient time management. This
involves looking at how much of your time is committed to other activities such as clubs, organizations, and sports. Sigman also suggested that students establish a Fixed Commitment Calendar. Fixed commitments include classes, work hours, mealtimes, sports, and family responsibilities such as dropping off or picking up children at school or day care, and time for socializing. Sigman concluded that knowing how much time a student has available for study is useless unless he or she identifies how much time is needed.

*Creating a plan for study.* According to McNamara (2000) listing what a student has to do is essential for efficient studying. Students should write down what they want to get out of their study time before they actually start. Additionally, students should prepare a schedule for the amount of time needed and incorporate periodic breaks into the equation. McNamara concluded that this sort of preparation voids the student’s excuse that he or she does not know what to do or where to start because there is so much to do. Often times not knowing what to do can make it easy to not do anything. Finally, checking things off a list will give students a sense of progress as they work through items.

*Goal setting.* Lock and Latham (1990) identified four reasons why goal setting improves motivation and performance. They are as follows:

- Goals direct our attention to the task at hand. Goals keep the student focused on the assignment and revert him or her back to it should distractions or procrastination occur.
• Goals mobilize effort. Goals are motivators for increased effort on the part of the student to finish assignments.

• Goals increase persistence. Goals help students persevere when assignments are mundane or difficult.

• Goals promote the development of new strategies when old strategies fall short. Goals help students evaluate their current progress and the effectiveness of that particular strategy. If the current strategy is not working, then goals can motivate students to select another strategy.

Bailey and Onwueguzie (2002) reported that college students tend to procrastinate, which means that they wait until the night before to actually begin studying for exams. While the relationship between study skills, study behaviors and academic achievement exists, a major stumbling block for many students is time management. As students disregard assignments till the last minute, opportunities for self-regulated improvement remain idle.

Ellis and Knaus (1977) identified the three main causes of procrastination as self-drowning, low frustration tolerance, and hostility.

*Self-drowning.* Ellis and Knaus (1977) noted that students often put themselves down when they do not complete their tasks successfully or on time. This sense of failure may cause students to believe that they are not very capable and that feeling often leads to procrastination. One reason students begin to feel incapable of completing their tasks is that the goals they have set for themselves in the past have been unrealistic. Living up to
these goals can be difficult and fear of not living up to them can cause the student to avoid the tasks required to reach them.

Low frustration. Ellis and Knaus (1977) argued that tolerance is another cause of procrastination. Some students experience a great deal of frustration when they attempt to complete certain assignments or projects. Because the task may appear to be too difficult or require a gross amount of time, just thinking about it may become a very unpleasant experience for students. Low tolerance for frustration may cause students to put the difficult task aside and do something else.

Hostility towards others. Ellis and Knaus (1977) concluded that students may put off doing assignments due to anger towards their professor. Angry feelings can increase feelings of frustration about the task. Together, these feelings lead to procrastination.

Van Blerkom (2002) identified seven strategies for overcoming procrastination. They are as follows:

- Use Good Time-Management Strategies. Students should estimate how much time the tasks will require, write the tasks down, and set priorities. Good time-management helps students overcome procrastination.
- Plan Ahead for Long-Term Tasks. Students can avoid procrastination by planning ahead for long-term tasks. Developing a schedule for long-term tasks and starting early can give students all the time needed to finish their goals.
- Break Down Large Tasks. Students can avoid procrastination by breaking down larger tasks. Often times, the size of an assignment may cause
procrastination, but completing smaller portions of the assignment periodically instead of trying to do it all at once can help students finish.

- Recognize That Not All Assignments Are Easy. Students must understand that there will be assignments that are difficult or time-consuming. However, establishing a reward system for completing these tasks could help prevent procrastination.

- Get Started. One of the best ways to overcome procrastination is to simply get started. Some students start with the easiest part of the assignment first or only a small part of it. However, once a student gets started, the more likely they are going to continue.

- Recognize That All Courses Are Relevant. Students must recognize that all courses are relevant. Often times, students view college as something to do in order to get a job. However, it also provides the student with the opportunity to be an educated person.

- Identify Escapist Techniques. A student should identify the escapist techniques he or she uses to avoid doing the assigned tasks. Students suddenly decide to visit family, clean the car, the house, check email, or just take a nap to avoid assignments. After those escapist techniques are identified, then develop the necessary strategies to get back on track.

Knapp (1972) reported that there is a relationship between academic achievement and time management. Self-regulated learners use the following study skills and study behaviors as it relates to time management:
• Asses their homework commitments
• Develop time-allotment schedules
• Commitments are assessed in priority order
• Time-allotment schedule sets short-term and long-term deadlines
• Recognizes the need for breaks
• Compare actual performances to the plan and adjust to meet contingencies as needed.

Bandura (1997) found that high achieving students make greater use of appropriate study skills and study behaviors to include time management. These self-regulated students use effective time management as an integral part of their academic achievement in high school.

In summary, time management is a study skill that is vital to academic achievement. While students generally have limited understanding of time management when they enter the ninth grade, this is a skill that can be taught. Yes, the skill can be taught, but as a self-regulated learner, there must also be motivation to reject distractions and focus on completing the desired goal.

**Studying in Groups**

Watson, Kendzoir, Dasho, Rutherford, and Solomon (1998) concluded that working in groups fosters an environment in which students can develop their own understanding, engage in new ideas, and challenge each other’s philosophy.

It is in the group environment that students learn to be help-givers and help-receivers. As self-regulated learners, study groups affect a student’s motivation to
achieve desired goals. Effective study groups target group and individual performances (Bandura, 1997). Moreover, Johnson, Johnson, Stanne, and Garibaldi (1990) concluded that effective study groups yield more productivity and achieve more academically in the form of grades than do individuals.

Ender (1985) concluded that effectiveness is another strength connected with study groups for adults. For example, study groups have been used to help undergraduate and graduate students master course material. These study groups typically involve three to four students who meet at least on a weekly basis to “share information, knowledge, and expertise about a course in which they are all enrolled” (Ender, 1985, p. 469). The idea is that each study group member will support and encourage the others and will obtain insight and knowledge through group effort.

In educational settings, the number of group sessions is usually dictated by divisional times in the school year, such as quarters or semesters. For example, if a semester lasts 16 weeks, then a study group may be geared toward a similar timetable. Yet, “the frequency of study group sessions and also the duration of the sessions are directly related to the intensity of group involvement and growth” (Gazda, 1989, p. 153). If group members have major problems, then the study sessions may last longer and be more frequent.

According to Gladding (1994) the number in a study group ultimately affects its outcome and rate of progress. With increased size, member interaction and relationships decrease, and the study group becomes more leader centered. Therefore, small groups of five to ten members may be ideal with younger students.
According to the Association for Specialists in Group Work (ASGW), study
groups promote efficient and effective accomplishment of group tasks among people who
are gathered to accomplish group task goals (2000). Hulse-Killacky, Killacky and
Donigian (2001) found that study groups work best if the following assumptions are met:

- If the purpose of the group is clear to all participants,
- If time is taken for culture building and learning about each other,
- If the ethic of collaboration, cooperation, and mutual respect is developed and
  nurtured,
- If conflict is addressed,
- If feedback is exchanged,
- If members are active resources,
- If members learn to be effective and influential participants (p. 21)

Tuckman and Jensen (1977) note that all healthy groups go through
developmental stages, which they identify as forming, storming, norming, performing,
and adjourning. While in the forming stage, the study group rationalizes the need for its
existence. Next, considerations, such as meeting time, place, and frequency are
considered.

Corey and Corey (2002) note that how a study group is announced affects both
the ways it will be received by potential members and the kind of people who will join.
Some of the best ways of announcing the formation of a group are through word of
mouth with colleagues, personal contact with potential study group members, and written
announcements to a targeted audience.
Couch (1995) cites four interdependent steps that are necessary for conducting an effective pre-study group screening interview:

- **Identify needs, expectations, and commitment.** Commitment is considered the most crucial of these factors.
- **Challenge myths and misconceptions.** Members must have accurate information and not misinformation about the proposed study group.
- **Convey information.** The nature of roles and importance of balancing content and process may be useful to explain.
- **Select members.** Invite people to join the study group who are likely to benefit from the experience.

According to Napier and Gershenfeld (1989) limits are the outer boundaries of a group in regard to behaviors that will be accepted with the study group. Explicitly, these limits take the form of rules regarding acceptable behaviors and procedures related to time. Implicit limits are more subtle and involve such actions as the verbal reinforcement or discouragement of certain content topics.

Jacobs et al. (2002) provide eight different ways of beginning the first study group session. They are as follows:

“Start with an opening statement about the group; then conduct and introduction exercise” (Jacobs et al., 2002, p. 84). This particular type of process involves the leader taking about five minutes to describe the format and purpose of the group and introduce him-or herself. It is followed by a brief exercise, such as members introducing themselves.
“Start with a long opening statement; then get right into the content of the group” (Jacobs et al., 2002, p. 84). In this style, which is often used in educational and task groups, the leader begins by giving members an explanation of the group’s content or purpose. He or she then quickly gets group members involved in the group without introducing them to one another because either the group is too large or members already know one another.

“Start with a long opening statement about the group and its purpose; then conduct an introduction exercise” (Jacobs et al., 2002, p. 85). This procedure is used when the group’s focus is educational or task based. In the long opening statement, the leader reminds group members of their purpose and helps the group get down to business by describing what the group is going to do. This option works best when the information given is interesting and informative.

“Start with a brief statement about the group; then get into the content” (Jacobs et al., 2002, p. 85). This opening is ideal for task groups in which members know one another and the group’s purpose is clear. In this opening, members freely exchange ideas and suggestions at the initial group meeting.

“Start with a brief statement about the group; then have the members complete a short sentence-completion form” (Jacobs et al., 2002, p. 86). The sentence-completion format is useful in helping members focus on the purpose of the study group. It is employed in task groups when no introductions are needed.

“Start with a brief statement about the group; then have the members form dyads” (Jacobs et al., 2002, p. 87). In this type of opening, the purpose of coming to the study
group is clear, and members have some comfort in being in the group. Breaking into dyads helps group members focus more on content and/or the purpose of the group experience.

“Start with an introduction exercise” (Jacobs et al., 2002, p. 87). This type of introduction is employed when group members have a strong idea of the group’s purpose. This process helps members introduce themselves and immediately focus on the content of the group.

“Start with an unusual opening-one that grabs the members” (Jacobs et al., 2002, p. 88). The idea behind this type of beginning is to get group members’ attention in ways that would otherwise not be possible. For example, a leader might stage a verbal argument with a co-leader on ways to effectively communicate. Group members would be asked to offer feedback on what they saw. A discussion would ensue about communication and ways to do it effectively.

According to Maples (1988) study groups struggle with issues related to structure, direction, control, and interpersonal relationships during the *storming stage*. While frustration and noise sometimes increase during this stage, it is important that “the study group and its members express and explore differences between and among members” if the group is to be productive (Donigian & Malnati, 1997, p. 64).

Yalom (1995) noted that during the storming stage, study group members are initially more anxious in their interactions with one another because they are afraid of losing control, being misunderstood, or looking foolish. Some avoid taking a risk by
remaining silent at this time; others who want to establish their place in the group deal with their anxiety by being more open and assertive.

Ponzo (1991) concluded that a global way of dealing with the storming part of transition is to get feedback from the study group members about how they are doing and what they think needs to be done. Ormont (1988) indicated that when the study group works through storming, “more plain talk, open risk taking, and greater appreciation for one another will occur” (p. 44).

Tuckman (1965) indicated that the norming stage is often characterized as one of the major aspects of study groups. In many ways, it parallels the forming stage in its emphasis on positive emotions. However, because study group members are more informed and experienced with one another, they can concentrate on themselves and one another better in the group.

One main task objective in the norming stage is for members to reach an agreement on the establishment of norms, or rules and standards from which to operate the study group. Some norming is done on a nonverbal, mostly unconscious, level, but other aspects of norming are conducted verbally. Through norms, group members learn to regulate, evaluate, and coordinate their actions (Gibbs, 1965).

Norming gives the study group members guidelines under which to operate. They are, therefore, able to gauge how well they are doing individually and as a group. If discomfort is evident in the group, then members may realize that they and/or the group as a whole are regressing instead of progressing. It is from the baseline of norming that the group is measured or referenced (Gladding, 2003).
According to George and Dustin (1988) after a group makes the transition from forming to resolving conflicts and norming, the performing stage begins. This is the time of problem solving that usually lasts longer than any of the other study group stages. The performing stage is often regarded as the most productive stage in group development and is characterized by its constructive nature and the achievement of results.

Ohlsen, Horne and Lawe (1988) concluded that “a healthy group, regardless of its purpose, displays a great amount of intimacy, self-disclosure, feedback, teamwork, confrontation, and humor” (p. 88). These positive behaviors are expressed in interpersonal relationships among members. Other behaviors of the group during this stage are primarily focused on task-related endeavors, such as achieving specific goals.

Yalom (1995) noted that the major emphasis in the performing stage is productivity, whether the results are tangibly visible or not. Study group members focus on improving themselves and/or achieving specific individual and group goals. One way productivity may be increased is by encouraging equal member airtime through making the rounds. In this procedure, study group members who are given time during the study group session to discuss issues of concern to them will invest more deeply in the group with each session and will do the type of work that can benefit themselves and the group as a whole.

One of the most productive aspects of the study group in the performing stage is the learning and sharing of ideas and information among group members. As a result, the entire group membership is enriched. Additionally, some study groups achieve the ability
to generate new thoughts spontaneously. Group stuckness cannot remain if the study group is really working (Bales, 1951).

According to Corey (2000) the *adjourning stage* is equally as important as the beginning stage of a study group. During the forming stage of a group, study group members get to know one another better; during the adjourning stage, they come to know themselves on a deeper level. If adjourning is properly understood and managed, it can be an important force in promoting change in individuals (Yalom, 1995).

Primary activities of study group members in adjourning are to (a) reflect on their past experiences, (b) process memories, (c) evaluate what was learned, (d) acknowledge ambivalent feelings, and (e) engage in cognitive decision making (Wagenheim & Gemmill, 1994).

Adjourning provides study group members an opportunity to clarify meaning of their experiences, consolidate the gains they have made, and make decisions about the new behaviors they want to carry away from the group and apply to their everyday lives (Cormier & Hackney, 2000).

Fullilove and Treisman (1990) tracked 20 African American and 20 Chinese American students to assess what study habits distinguish a strong student from a weak student. All of the students were enrolled in a first semester calculus class (Mathematics 1a) designed for future scientists and engineers at the University of California at Berkeley (UCB). The researchers noted that the students in these two groups used vastly different study skills and study behaviors such as study time, studying alone or in a group and teacher assistance to accomplish the desired goal.
With the recommendation of the mathematics professors, African American students spent the recommended eight hours per week working on assignments. This group displayed the following study skills and study behaviors:

- Worked assignments alone
- Did not often seek help from the professor or the teaching assistant
- Checked over work and used textbook examples to solve encountered problems

Conversely, while the mathematics professor recommended eight hours of study, the Chinese American students displayed the following characteristics:

- Typically spent about 14 hours a week on their assignments
- Prepared for quizzes and tests
- Spent eight hours alone
- Six hours working in groups in a social setting
- Helped each other with difficult problems
- Checked each other’s work
- Sought assistance of a teaching assistant for problems they could not solve

Fullilove and Treisman (1990) reported that at the end of the first semester, most Chinese American students excelled, while 40% of the African American students earned grades of D plus or lower in Mathematics 1A.

Based on the results of this study, Fullilove and Treisman (1990) developed, designed, and implemented a mathematics workshop program (MWP) for African American students enrolled in Mathematics 1A in their first semester at UCB. Students
were placed in groups of five to seven students and spent four hours a week discussing and teaching each other how to solve complex problems.

From 1973 to 1984, Fullilove and Treisman (1990) monitored the progress of 646 African American students in the MWP. These students significantly outperformed non-MWP students. By 1985, 65% of the African American students in the MWP had earned degrees or were still enrolled in a mathematics-based major. This is noteworthy because in 1973, only 39% of UCB African American students had earned degrees or were enrolled in a mathematics-based major (Fullilove & Treisman, 1990).

In 1982, Chicano/Latino students enrolled in the MWP. During this year, African American and Chicano/Latino students substantially outperformed White and Asian students in the Mathematics 1A course (Treisman, 1992). This program expired the next year (1983) due to inadequate funding.

In summary, research has continued to demonstrate that while there are individual study practices that enhance academic achievement and preparation, effective study groups can provide a supplemental and substantial role to academic achievement and preparation. It is the interaction of ideas and philosophies, the motivation, and the support that allow self-regulated learners the opportunity to evaluate, develop, and implement the necessary study skills and study behaviors for academic success.

**Goal Orientation**

According to Ames (1992) research on goal orientation has identified two types: learning goals and performance goals. Learning goals require in-depth understanding of a task or subject matter. Performance goals are the actual behaviors that one demonstrates
to show understanding of the task or subject matter (Ames & Archer, 1988; Greene & Miller, 1996).

A learning goal orientated student seeks to develop intimate knowledge of content, whereas a performance goal oriented students promote a general understanding of information for an immediate objective (Ames, 1992). Zimmerman and Risemberg (1997) reported that learning goal-oriented students invest more time and effort into learning new information, control behavioral, environmental, and personal factors while performance goal oriented students lack the persistence when material is difficult. In summary, learning goal orientation is positively related to academic performance.

**Self-Efficacy**

Bandura defined self-efficacy as “the belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (1997, p. 3). According to Maddux (1995), there are several types of efficacy beliefs. They are as follows:

- **Task Self-Efficacy**: The belief in a student’s capability to perform a particular task; a student’s belief that he/she can earn an “A” on an exam.

- **Self-Regulatory Efficacy**: This type of efficacy concerns the ability to exercise influence over one’s own motivation, thought processes, emotional states, and patterns of behavior. Self-regulatory efficacy might be used to invest beliefs about tasks that are familiar but that must be performed on a regular basis to achieve the desired results. For example, a student might have confidence to
earn an “A” on a particular exam but may lack confidence to earn an “A” on exams on a regular basis due to competing time demands.

- **Ameliorative and Coping Efficacy:** Ameliorative efficacy is also referred to as coping efficacy. It concerns beliefs about coping with competitive stress, controlling unwanted thoughts, or managing performance slumps (Bandura, 1997). For example, a student that is studying for college the Scholastic Assessment Test (SAT) may feel competitive stress and the need to focus on the task and avoid unwanted thoughts to include previous failures.

- **Competitive Efficacy:** Feltz and Chase (1998) have defined competitive efficacy as the belief that one can compete successfully against an opponent. For example, a student may be confident that he or she can win a spelling bee.

- **Learning Efficacy:** It is the belief in one’s capability to learn a new skill. A strong sense of learning efficacy can accelerate the process of mastering a skill because people with this sense will invest more effort in practicing the skill than those who doubt their learning capabilities (Bandura, 1997). According to Nicholls, (1984a), those who regard ability as an acquirable skill are more likely to also have confidence in being able to learn it and view their mistakes as a natural part of the learning process.

- **Collective Efficacy:** Bandura (1997) defined collective efficacy as “a group’s shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainment” (p. 477). Similarly to self-efficacy, collective efficacy is the primary determinant of a group’s level
of motivation to accomplish a specific goal. This is reflected in the challenges that the group would undertake, the effort they expend in the given activity, and their perseverance, as a group, in the face of difficulties (Feltz, Short, & Sullivan (2008).

- Preparatory Efficacy and Performance Efficacy: Bandura (1986b) differentiates between preparatory efficacy and performance efficacy. Preparatory efficacy is a belief about a task and includes the acquisition of skills. It should not be confused with efficacy about one’s ability to learn or prepare.

In the skill acquisition or preparatory phase, Bandura suggested that some self-doubt is necessary to provide the incentive to invest the time and effort to acquire the knowledge and skill needed to become proficient. Beilock and Carr (2001) concluded that if a person has high self-efficacy, especially for a task that he or she perceives as easy, there is little reason to invest much time and effort in practicing that task. Beilock and Carr also warned that too much self-doubt can turn into a stressor and debilitator rather than a motivator to practice. In the performance phase, however, Beilock, Carr, MacMahon and Starkes (2002) explained that a student cannot execute a task very well while plagued with self-doubt. “Explicit monitoring” theories of choking under pressure suggest that these self-doubts focus one’s attention on motor skills that have become automated. Beilock and Feltz (2006) concluded that a high-level skill that becomes automated with extended practice may be especially susceptible to the negative consequences of performance pressure because high-level, expert performance is thought
to operate largely outside of conscious control and can be harmed when explicit attention to it is prompted by self-doubt.

The belief in personal efficacy has substantially greater impact on academic performance than the personal, social, and occupational outcomes expected for proficient performance (Shell, Murphy & Bruning, 1989).

**Self-Efficacy vs. Self-Esteem**

According to Bandura (1997), the concepts of self-esteem and perceived self-efficacy are often used interchangeably as though they represented the same phenomenon. In fact, they refer to entirely different things. Perceived self-efficacy is concerned with judgment of personal capability, whereas self-esteem is concerned with judgments of self-worth.

Mone, Baker and Jeffries (1995) noted that people need much more than high self-esteem to do well in given pursuits. Many achievers are hard on themselves because they adopt standards that are not easily fulfilled, whereas others may enjoy high self-esteem because they do not demand much of themselves or they derive their esteem from sources other than personal accomplishments.

Harter (1990) concluded that students vary in the extent to which they derive a sense of self-worth from their school work, their family life, their community and social life, and their recreational pursuits. For example, some students may take pride in their academic accomplishments but devalue themselves in their social setting. Hard-driving school administrators may value themselves highly in their occupational pursuits but devalue themselves as parents.
Steele (1996) stated that cultural stereotyping is a way in which evaluative social judgments affect a sense of self-worth. People are often cast into valued or devalued groups on the basis of their ethnicity, race, sex, or physical characteristics. They then get treated in terms of the social stereotype rather than on the basis of their actual individuality.

Hallie (1971) concluded those people who possess attributes that are socially disparaged, and who accept stereotyped negative evaluations of others, will hold themselves in low regard irrespective of their talents. When self-devaluation arises from multiple sources, multiple corrective measures are needed; for example, fostering pride in one’s characteristics but also cultivating competencies that instill a high and resilient sense of personal efficacy for personal accomplishments.

Self-Efficacy, Study Skills, Study Behaviors, and Academic Achievement

Tollefson et al. (1979) conducted a study analyzing self-reported study skills, study behaviors, test anxiety, and past achievements. The results revealed that students’ past achievement explained their current level of efficacy.

Warkentin, Griffin, and Bates (1994) also reported that there is a positive relationship between self-efficacy, study skills, and study behaviors. Bandura (1997) concluded that self-efficacy is a predictor of academic achievement.

Self-Efficacy and the Individual Student

Buhler (1968) stated that between ages eight and twelve, a student’s self-perception crystallizes as an academic achiever or a non-achiever. At this juncture, all of the student’s prior experiences of achievement and failure converge to generate an
attitude toward academic achievement that guides cognitive and meta-cognitive thought processes and thus influences self-efficacy for adolescents.

Research by Weiner (1979) and Dweck and Leggett (1988) revealed that as a student begins to believe that he/she does not have the necessary math skills, they develop a low level of self-efficacy. This in turn, is related to and may affect their motivation to study and become proficient in math skills.

A low sense of mathematical efficacy is accompanied by high math anxiety. Past performance experiences with mathematics do not affect anxiety directly. Rather, the impact of past successes and failures on anxiety is mediated entirely through their effects on beliefs of personal efficacy (Meece, Wigfield & Eccles, 1990).

According to Wortman et al. (1976) if failures weaken a student’s sense of efficacy, they become anxious about scholastic demands, but if their efficacy beliefs are unshaken by failures, they remain unperturbed. Students are left anxious by repeated failures when they view them as due to personal incapacities, but they are unmoved by failures when they construe them as due to situational factors.

In a study by Colins (1982) math students with varying degrees of mathematics self-efficacy were tested on a set of mathematics problems. Upon receiving the same mathematics instruction, the students were retested on the problems they missed and were given new problems to solve. Colins concluded that students with high self-efficacy completed more problems correctly and recalculated more of the problems they missed than did students with low self-efficacy.
At the college level, a low sense of efficacy to manage the academic demands and interpersonal aspects of college life is accompanied by high levels of anxiety (Solberg, O’Brien, Villareal, Kennel & Davis, 1993). Moreover, a study by Tuckman (1990) reported that college students who put off assignments and missed deadlines exhibited low levels of self-efficacy. These students expressed doubt in their abilities and did not put forth maximum effort.

According to Zimmerman (1989) when students have low levels of self-efficacy, they avoid assignments, procrastinate, and lack self-motivation to perform specific tasks. Additionally, these students recall previous failures as a reason for lack of self-motivation. Research has shown that low self-efficacy undermines academic achievement.

Pintrich and DeGroot (1990) revealed that a student’s perceived self-efficacy involves the belief in his or her capabilities to organize and implement a plan; it is also related to both cognitive strategy use and to self-regulation through the use of meta-cognitive strategies. Pintrich and DeGroot found that academic self-efficacy also correlated with semester grades; final grades; and grades received for in class seatwork, homework, exams, quizzes, essays, and reports. Pintrich and DeGroot concluded that in order to be successful in the classroom, students need the will and the study skill when engaged in study behaviors.

Bandura (1977, 1997) and Valett (1977) note that there is a connection between feelings of self-efficacy, study skills, and study behaviors. Self-efficacy encompasses how people think, feel, and motivate themselves, and ultimately act (Bandura, 1994).
Bandura (1977) revealed that in order to achieve academically, students must develop study skills and adopt them as study behaviors. Students also need to find the appropriate environment outside the classroom as well as ways to motivate themselves to learn independently. When this is accomplished, students’ level of self-efficacy rises, which in turn motivates them to repeat the learning pattern that they have created.

According to Pajeres (2002), students who have a high level of self-efficacy use more cognitive and meta-cognitive strategies. “Additionally, these students work harder regardless of previous achievement, persist longer, and persevere in the face of adversity” (Pajeres, 2002, p. 117).

Bolles (1975a) notes that personal control enables a student to predict events and shape them to his/her liking. A major issue of contention is whether the exercise of personal efficacy is impelled by an inborn drive for control or is motivated by anticipated benefits. There is a fundamental difference between the two. Drives push action, anticipated incentives draw it.

Kahn, Wolfe, Quinn and Snoek (1964) note that it is usually the most self-efficacious individuals who assume leadership positions of high potential stress and strain. They are held accountable but must depend on others to get things done. Their lives can be made miserable if they have to preside over conflicting social expectations, pressures, and demands. These burdensome aspects of personal control can dull the appetite for it. Attractive incentives, privileges, and heady social rewards are therefore needed to get people to seek control in pursuits involving complex skills, onerous responsibilities, and weighty risks.
**Self-Efficacy and Peers**

Efficacy information can also be derived through observing and comparing a student’s self to his/her peers. This modeling process involves observing the performance of one or more other students, coding the observed information, noting the consequence of the performance, and then using this information to form judgments about a student’s own performance (Maddux, 1995).

Modeling and social comparison can transmit efficacy information in several ways. Observing repeated demonstrations by a proficient model can provide instructional information on how to perform a task correctly and efficacy information that the task can be learned (Lirgg & Feltz, 1991). Modeling of coping strategies (e.g., positive self-talk, self-instruction), as well as observing others making progress toward a certain performance level, can also convey efficacy information that a challenging task is surmountable (Gould & Weiss, 1981).

One particular mode of modeling influence that has been suggested to enhance a student’s sense of efficacy and performance is self-modeling (Dowrick, 1991). In self-modeling, the individual repeatedly observes the correct or best parts of his/her own past performance and uses these as a model for future performances (Dowrick & Dove, 1980).

Various sources of efficacy information have been shown to be generally weaker than performance accomplishments; however, their influence on self-efficacy can be enhanced by a number of factors (Feltz & Riessinger, 1990). For example, the less direct knowledge that students have about their own capability to perform a task, the more they will rely on the modeled behavior of others in judging their own capabilities.
The effectiveness of modeling procedures on a student’s self-efficacy judgments also is enhanced by perceived similarities to model in terms of performance or personal characteristics (Weiss, McCullagh, Smith & Berlant, 1998). Perceived performance similarities carry more efficacy weight than perceived similarity based on personal characteristics (e.g., gender).

Ellis and Lane (1963) noted that the peers with whom a student associates partly determine which potentialities will be cultivated and which will be left undeveloped. The way in which peer affiliations can affect the entire course of intellectual development is shown in studies of students from impoverished backgrounds who went on to college and professional careers at a time when it required overcoming daunting barriers to do so.

Krauss (1964) concluded that low socio-economic status (SES) students’ parents could not provide the necessary resources and preparatory academic skills because of their limited schooling. However, a parent or family acquaintance who valued education highly usually played a key role in setting the course of these children’s intellectual development during their formative years. The valuation of education they instilled was further developed by teachers who took special interest in the children’s talents. These evolving value preferences led to selective association with college-oriented peers who, by their interest and example, promoted attitudes, achievement standards, and socio-cognitive skills conducive to intellectual pursuits. Efficacy beliefs are both products and determiners of peer affiliations.

At the college level, students must choose which educational directions to pursue and assume major responsibility for their own learning. Those who have a high sense of
efficacy are more successful in regulating their own learning and do better academically than those who are beset with uncertainties about their intellectual capabilities (Pintrich & Schrauben, 1992).

Self-Efficacy and the Environment

Bandura states that students will approach, explore, and try to manage situations within their perceived capabilities, but unless they are externally coerced, they avoid transactions with those aspects of their environment that they perceive exceed their coping abilities (1991b).

In social cognitive theory, efficacy beliefs are developed and altered not only by direct mastery experiences but also by vicarious experience, social evaluations by significant others, and changes in physiological states or how they are construed. These differences in theoretical approach have significant implications for how a student goes about creating a strong sense of efficacy.

Rosenholtz and Rosenholtz (1981) concluded that there are a number of school practices that, for the less talented or ill-prepared, tend to convert instructional experiences into education in inefficacy. These include lock-step sequences of instruction, which lose many children along the way who fail to learn at the required pace. Sorting students into ability groupings further diminishes the perceived self-efficacy of those cast into lower academic tracks where little is expected of them, and so they continue to fall further behind academically.
The introduction of instruments used to measure study skills and study behaviors goes back as early as 1941 when C. Gilbert Wrenn published the *Study Habits Inventory*. The inventory examined note taking and reading strategies used by students when preparing for examinations (Wrenn, 1941).

Bliss and Mueller (1986, 1987, 1993) presented the *Study Behavior Inventory*, which examined study behaviors of college and university students. This instrument consisted of 46 items that measured academic self-efficacy, behaviors used while preparing for routine assignments and tasks, which included assigned readings and reviewing notes, and behaviors used for long range tasks such as major exams, projects, and papers.

Bliss and Mueller (1987) pointed out the difficulty with using measures of study skills for making instruction decisions with the following statement:

> We can effectively teach study skills to students, but we cannot necessarily make them apply these skills in the course of their academic careers. Between knowing how to study and actually using these skills in preparing for academic tasks there is a phenomenon which relies on students’ feelings about the usefulness of these skills and their attitudes toward their academic endeavors and themselves (p. 16)

The Study Behavior Inventory- High School Version (SBI-HS) was developed using Bliss and Mueller’s original Study Behavior Inventory format. It contained 46 items, however it measured academic self-perception and feelings of low self-efficacy,
academic preparation behaviors, time management, and the social aspect of taking tests and studying (Bliss, 2002).

This instrument was administered to 3,336 students in Grades 9 through 12 in four high schools in different areas of the United States. The results produced a set of responses that were very similar to the responses obtained by an earlier pilot study of the Study Behavior Inventory designed for high school students, involving 1,085 students. The findings evidenced high internal consistency in all four factors and indicated high correlations found between SBI-HS scores and grade point averages (GPAs). The SBI-HS was administered to UC freshmen in order to assess what skills or study behaviors they utilized to gain access to higher education (Bliss, 2002).

In summary, one of the key factors that prevent low-income students of color from being admitted to post-secondary schools is academic preparedness (Choy, Horn, Núñez, & Chen, 2000). One way to look at the educational preparation of students of color is to focus on study skills and study behaviors. The literature review provided evidence that there is a positive relationship that exists between study skills, study behaviors, self-efficacy, and academic achievement. Additionally, the literature review provided research to suggest that these study skills and study behaviors can be taught. The Study Behavior Inventory- High School Version is an instrument used to assess study skills and study behaviors.

The purpose of this study was to explore the role of skills and study behaviors in students of color who traditionally have low admissions rates to the University of California. Chapter 3 will explain the research methodology used in this study.
Chapter 3

METHOD

The purpose of this research was to explore the role of skills and study behaviors in students of color that traditionally have low admissions rates to the University of California. By assessing the skills possessed by students from these groups who have been accepted at University of California there may be an opportunity to educate younger students on successful study skills to increase admissions rates. In assessing the educational preparation of students of color for post-secondary education, this research focused on study skills and study behaviors. This study was designed to provide information to students, educators, decision makers, and school administrators for the purpose of understanding student needs, which can be used to plan for subsequent program development for the entire student body, not just those in academic difficulty.

Quantitative Subjects

The University of California at Davis (UCD) is one of ten campuses in the University of California (UC) system. It is located in the Central Valley of California near Sacramento. UCD has the largest campus within the UC system. UCD offers more than 100 undergraduate majors and 80 graduate programs; it has the largest variety of any of the University of California campuses (University of California, 2009).

Demographically, the student body consists of students from all of the 50 United States and over 75 different countries. For Fall 2009 undergraduate students, the ethnicity of the student population consists of 40% Asian, 35% White, 14% Hispanic, three percent
African American, one percent American Indian, and seven percent Other; 55% of the undergraduates are female and 45% are male.

This researcher actively recruited 77 Fall 2009 enrolled freshmen students of color (31 African American, 18 Asian American, and 28 Hispanic/Latino) from UCD for the quantitative survey. Within the groups, at least nine were male and eight were female. Inclusion or exclusion was based on the self-identification of the student. There was no cost to the subjects beyond the time and effort required to complete the quantitative survey and the in-depth qualitative interview. No inducements were offered for participation in this study. This chapter will begin with demographic information on the 77 UC Davis freshmen of this study.

Table 3 provides demographic data on the participants of this study. Participants were asked to self-identify their race and gender. The three ethnic categories were African American, Hispanic/Latino and Asian-Pacific Islander; male or female. Table 3 illustrates that of the 30 participants that were African American, 53.3% were male and 46.7% were female. There were 28 participants that self-identified themselves as Hispanic/Latino: 39.3% were male and 60.7% were female. There were 18 participants that self-identified themselves as Asian-Pacific Islander: 50% were male and 50% were female. Therefore, 47.4% of the total respondents were male and 52.6% were female. One participant skipped this question.
Table 3

UC Davis Participant Demographic Data

<table>
<thead>
<tr>
<th></th>
<th>African American</th>
<th>Hispanic/Latino</th>
<th>Asian-Pacific Islander</th>
<th>Response Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>53.3%</td>
<td>39.3%</td>
<td>50.0%</td>
<td>47.4%</td>
</tr>
<tr>
<td></td>
<td>(16)</td>
<td>(11)</td>
<td>(9)</td>
<td>(36)</td>
</tr>
<tr>
<td>Female</td>
<td>46.7%</td>
<td>60.7%</td>
<td>50.0%</td>
<td>52.6%</td>
</tr>
<tr>
<td></td>
<td>(14)</td>
<td>(17)</td>
<td>(9)</td>
<td>(40)</td>
</tr>
<tr>
<td>Answered Question</td>
<td>30</td>
<td>28</td>
<td>18</td>
<td>76</td>
</tr>
<tr>
<td>Skipped Question</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Instrumentation

This research used a quantitative methods approach. A quantitative Study Behavior Inventory-HS (SBI-HS) by Bliss (2002) was used. The survey contained directions for participants and explained how to complete the inventory. Students were directed to read the 46 statements, which encompassed a Likert scale where students implied the following: “Rarely or never true in my case”, “Sometimes true in my case”, “Often or usually true in my case”, “Always or almost always true in my case”. The inventory took approximately 15-20 minutes to complete. This inventory is a standardized measure that has been used extensively with college students with no negative effects reported. Additionally, demographic and background data was collected as a separate attachment to the SBI-HS survey.

The SBI-HS was administered to UC freshmen in order to assess what skills or study behaviors they utilized to gain access to higher education. The SBI-HS was used to address the following research questions:
• What are the study skills and study behaviors of the admitted freshmen students of color at UC Davis?
  o What study skills and study behaviors are similar?
  o What study skills and study behaviors are different?

  Study skills, as it relates to this study, focus on meta-cognition, self-efficacy, time management, academic preparation, and group study.

  Procedures

  This researcher emailed the chairs of the following UC Davis departments to inquire about proper protocol for administering a quantitative survey to freshmen students of color within their departments: Communications, Education, English, Mathematics, Psychology, and Human and Community Development Department. Depending upon the response from the aforementioned department chairs, this researcher asked for permission to drop off hardcopy questionnaires with a pre-paid return envelope for Fall 2009 freshmen students of color to take if they chose to complete the survey in hardcopy form. For those students interested in completing the survey online, a website was provided. Additionally, this researcher asked if the professors within the aforementioned departments would allow this researcher the opportunity to speak to the class for five minutes to explain the purpose of the survey and leave it for them to pick up, should they choose.

  The Communications Department chair responded that it would be preferable for this researcher to provide the survey in electronic form and the department would distribute the survey to its 350 students. The English Department responded with the
same preference and distributed the survey to its 700 English majors. The Psychology Department allowed this researcher to distribute hardcopy questionnaires with a pre-paid return envelope to students as they entered class or while they were leaving, but not during the formal class period. The Education, Mathematics, and Housing and Community Development Departments did not respond to this researcher’s request for student access. Therefore, the quantitative surveys were distributed from a secondary source.

Consent was obtained from the subjects in the following manner:

- The first page of the hardcopy survey had a consent form where the subject indicated by using a check mark that he/she had read, understood, and agreed to participate in this research. Passive consent was used to protect the participant’s identity and to maintain consistency between the hardcopy and online versions of the survey.

- The first page of the online version of the survey had a consent form. It was nearly identical to the hardcopy consent form. The consent line said, “By completing this survey, you are agreeing to participate in the research.” The online consent form included “I agree” and “I do not agree” buttons on the website for participants to click their choice of whether or not they consented to participate. If the respondent clicked “I do not agree,” he or she automatically exited out of the survey immediately. The website thanked the respondent for considering the survey. No signature was required to protect subjects’ rights to privacy and safety.
Chapter 4

INTRODUCTION

The first three chapters of this study provided an introduction, a thorough literature review and the methodology and research design that was used to examine the role of study skills and study behaviors in students of color who traditionally have low admissions rates to University of California. This chapter reports the findings and interpretation of the data.

Quantitative Findings

There were five themes that emerged from the SBI-HS survey: meta-cognition, self-efficacy, time management, academic preparation, and social nature.

The quantitative findings will be reported in the following manner:

- Similarities and Differences in Meta-Cognition and Self-Efficacy Among Students of Color
- Similarities and Differences in Time Management Among Students of Color
- Similarities and Differences in Academic Preparation Among Students of Color
- Similarities and Differences in Social Nature Among Students of Color

Similarities and Differences in Meta-Cognition and Self-Efficacy among Students of Color

Meta-cognition. According to Perkins (1995) the more information students have in reference to effective learning strategies, the greater their meta-cognitive awareness. Meta-cognition, as it relates to this study, refers to a level of thinking that involves active
control over the process of thinking that is used in learning situations. If a student with poor academic performance is aware of how he or she learns and how to control the learning process, this student can improve academically (Zimmerman, 1995).

Some examples of meta-cognitive skills are retrieving prior knowledge (remembering what was read), note taking (trouble identifying the information that was important), identifying important information (writing down things that turn out not to be very important). Additional meta-cognitive skills include:

- being motivated (study so that they will understand the material; not just memorize the facts)
- good organization skills (difficult to plan work when faced with a test)
- monitoring comprehension (find it hard to pick out important material in reading assignments that will later appear on tests).

Relative to similarities in meta-cognition among these students of color, there are three meta-cognitive study skills that can be taught: retrieving prior knowledge, note taking and identifying important information. For example, when asked about retrieving prior knowledge, the majority of African Americans (48.4%), Hispanic/Latino (42.3%), and Asian-Pacific Islander (33.3%) “sometimes” felt that after reading several pages of an assignment, they were unable to remember what they read. Moreover, with regard to note taking, the majority of African Americans (51.6%), Hispanic/Latino (57.7%), and Asian-Pacific Islander (35.3%) “sometimes” felt that when they took notes during class, they had trouble identifying the information that was important. Finally, half (50%) of the
respondents reported that they “sometimes” wrote down things that turn out not to be very important.

Relative to differences in meta-cognition among students of color, three additional meta-cognitive study skills were discovered that could be taught: *being motivated, good organization skills and monitoring comprehension*. With regard to motivation, the majority of African Americans (32.3%) “sometimes” try to study so that they will understand the material; not just memorize the facts. However, the majority of Hispanic/Latinos (46.2%) and Asian-Pacific Islanders (41.2%) indicated that they “often” try to study so that they will understand the material; not just memorize the facts.

When asked about their organizational skills, the majority of African Americans (40.0%) “rarely” found it difficult to plan their work when faced with a test. However, Hispanic/Latinos were evenly divided between “rarely or never” (42.3%) and “sometimes” (42.3%) with regard to whether they found it difficult to plan their work when faced with a test. Additionally, Asian-Pacific Islanders were evenly divided between “sometimes” (41.2%) and “often” (41.2%) with regard to whether they found it difficult to plan their work when faced with a test.

“Monitoring comprehension” is an awareness of the quality of processing information. When asked about identifying important information for future tests, the majority of African Americans (56.7%) and Asian-Pacific Islanders (50.0%) felt that they “sometimes” find it hard to pick out important material in reading assignments that will later appear on tests. However, the majority of Hispanic/Latinos (46.2%) “often” find it hard to pick out important material in reading assignments that will later appear on tests.
The majority of African Americans (48.4%) indicated that they “sometimes” forgot names, dates and other details that they really did know. However, the majority of Hispanics/Latinos (38.5%) “often” forgot names, dates and other details that they really did know. Moreover, Asian-Pacific Islanders were evenly divided between “sometimes” (35.3%) and “often” (35.3%) with regard to whether they forgot names, dates and other details that they really did know.

**Self-efficacy.** Research by Weiner (1979) and Dweck and Leggett (1988) revealed that as a student begins to believe that he/she does not have the necessary study skills, they develop a low level of self-efficacy. As indicated in Table 4, the data suggests that the majority of students of color across the three groups “sometimes” do not know how to study, which affects “their belief in their capabilities to organize and execute the courses of action required to produce given attainments” (Bandara, 1997, p. 3).

Pintrich and DeGroot (1990) revealed that a student’s perceived self-efficacy involves the belief in his or her capabilities to organize and implement a plan; it is also related to both cognitive strategy use and to self-regulation through the use of meta-cognitive strategies. Pintrich and DeGroot found that academic self-efficacy also correlated with semester grades; final grades; and grades received for in class seatwork, homework, exams, quizzes, essays, and reports. Self-efficacy, as it relates to this study, encompasses how people think, feel, motivate themselves, and ultimately, act (Bandura, 1994).

According to the data from this study, as it relates to self-efficacy, the majority of Hispanic/Latinos (48.0%) and Asian-Pacific Islander (43.8%) felt that “sometimes”
worrying about how they will do interfered with their studying for, and performance on, tests. However, the majority of African Americans (46.7%) indicated that this is done “rarely.” Moreover, the majority of African Americans (48.4%) and Hispanic/Latino (46.2%) said that they “sometimes” found it hard to think clearly when they were faced with a test. They believed that they did poorly on tests because of this. However, the majority of Asian-Pacific Islanders (50.0%) indicated that they “often” found it hard to think clearly when they were faced with a test.

Finally, the majority of African Americans (54.8%), Hispanic/Latino (38.5%), and Asian-Pacific Islander (50.0%) “sometimes” get nervous and confused when taking tests. Almost half (48% of the total respondents) reported that, because of this, they “sometimes” may not answer the questions as well as they could have.

Table 4 summarizes the aggregate mean responses to the items reflected in the survey for skills and study behaviors of students of color as it relates to meta-cognition and self-efficacy. The majority of all three groups “sometimes” do not know how to study, which influences their belief in their abilities.

As shown in Table 4, while the majority of African Americans (45.24%) “sometimes” felt that they did not know how to study, the second highest percentage of African Americans (31.99%) “rarely” felt that they did not know how to study. The majority of Hispanic/Latinos (43.27%) “sometimes” felt that they did not know how to study, however, the second highest percentage of Hispanic/Latinos (29.77%) “often” did not know how to study. Similarly, the majority of Asian/Pacific Islanders (37.22%)
“sometimes” did not know how to study, however, the second highest percentage of Asian/Pacific Islanders (36.60%) “often” did not know how to study.

Table 4

*Aggregate Mean Responses to Meta-Cognition and Self-Efficacy among Students of Color Summarized*

<table>
<thead>
<tr>
<th>Race</th>
<th>Rarely or Never</th>
<th>Sometimes</th>
<th>Often or usually</th>
<th>Always or almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>31.99%</td>
<td>45.24%</td>
<td>13.34%</td>
<td>9.44%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>15.80%</td>
<td>43.27%</td>
<td>29.77%</td>
<td>11.14%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>12.04%</td>
<td>37.22%</td>
<td>36.60%</td>
<td>14.16%</td>
</tr>
</tbody>
</table>

Similarities and Differences in Time Management among Students of Color

Zigmond (1990) noted that while students may have had a more nurturing environment during the primary years where instruction and behavior were dictated, when students enter the ninth grade, they are immediately faced with not only absorbing new information, but also trying to develop the appropriate study skills and study behaviors, including time management. Additionally, Zigmond reported that many ninth grade teachers acknowledged that incoming students have limited understanding about how to manage their time. Moreover, Knapp (1972) concluded that time management is another integral part of study behaviors. While students may possess the requisite study skills and study behaviors, if adequate time is not set aside, then having those skills and behaviors is irrelevant.

As indicated in Table 5, the data suggests that the majority of students across the three groups had problems with time management. Relative to similarities among
students of color, when asked about time management in general, the majority of African Americans (45.2%), Hispanic/Latinos (61.5%) and Asian-Pacific Islander (33.3%) felt that “sometimes” they do not use their time well. They spent too much time on some things and not enough on others. Moreover, Sigman (1992) noted that identifying how much time one has available for study is a critical step for efficient time management.

The majority of African Americans (35.5%), Hispanic/Latinos (44.0%) and Asian-Pacific Islanders (43.8%) felt that they “sometimes” kept their work in school up-to-date by doing their work regularly every day.

The following areas within time management showed relative differences among students of color: procrastination, planning study time, and prioritizing time.

**Procrastination.** Butler and Hope (1995) described procrastination as a symptom of poor time management. When asked about procrastination, the majority of African Americans were evenly divided between “sometimes” (32.3%) and “often” (32.3%) with regard to whether they waited until the last minute to write term papers and reports. Also, Asian-Pacific Islanders were evenly divided between “sometimes” (38.9%) and “often” (38.9%) with regard to whether they waited until the last minute to write term papers and reports. Finally, the majority of Hispanic/Latinos (38.5%) indicated they “often” waited until the last minute.

**Planning for study.** When asked about planning for study, the data indicated that the majority of Hispanic/Latinos (34.6%) and Asian-Pacific Islanders (44.4%) “often” did not plan their study time well. However, the majority of African Americans (35.5%) “rarely” did not plan their study time well.
Prioritization of time. When asked about prioritization of time, the majority of African Americans (71.0%) and Asian-Pacific Islanders (50.0%) “sometimes” had trouble finding enough time to study because they had after-school jobs that took up too much of their time. However, the majority of Hispanic/Latinos (30.8%) “rarely” had trouble finding enough time to study because they had after-school jobs that took up too much of their time.

Table 5 summarizes the aggregate mean responses to the items reflected in the survey for skills and study behaviors of students of color as it relates to time management. The majority of African American (33.36%) and Hispanic/Latinos (32.23%) “sometimes” had problems with time management. However, the majority of Asian/Pacific Islanders (37.76%) “often” had problems with time management.

As shown in Table 5, while the majority of African Americans (33.36%) “sometimes” felt that they had problems with time management, the second highest percentage of African Americans (25.47%) “rarely” felt that they had problems with time management. The majority of Hispanic/Latinos (32.36%) “sometimes” felt that they had problems with time management, however, the second highest percentage of Hispanic/Latinos (31.38%) “often” had problems with time management. Similarly, the majority of Asian/Pacific Islanders (37.76%) “often” had problems with time management, however, the second highest percentage of Asian/Pacific Islanders (36.49%) “sometimes” had problems with time management.
Table 5

*Aggregate Mean Responses to Time Management among Students of Color Summarized*

<table>
<thead>
<tr>
<th>Race</th>
<th>Rarely or Never</th>
<th>Sometimes</th>
<th>Often or Usually</th>
<th>Always or Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>25.47%</td>
<td>33.36%</td>
<td>24.38%</td>
<td>13.63%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>16.71%</td>
<td>32.23%</td>
<td>31.38%</td>
<td>19.67%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>11.81%</td>
<td>36.49%</td>
<td>37.76%</td>
<td>13.28%</td>
</tr>
</tbody>
</table>

*Similarities and Differences in Academic Preparation among Students of Color*

Pressley and Wharton-McDonald (1997) reported that self-regulated students use the following study behaviors for academic preparedness: *ask the teacher for assistance when needed and use a variety of learning strategies.*

*Teacher assistance.* When asked about obtaining teacher assistance, the majority of African Americans (54.8%) “often” tried to meet with teachers to talk over problems. However, the majority of Hispanic/Latinos were evenly divided between “rarely” (30.8%) and “sometimes” (30.8%) with regard to whether they tried to meet with teachers. Moreover, the majority of Asian-Pacific Islanders (33.3%) said they “sometimes” tried to meet with teachers.

With regard to students having clarity on assigned tasks from teachers, the majority of African Americans (35.5%) and Asian-Pacific Islanders (44.4%) indicated that they “sometimes” made sure that they clearly understood what their teachers wanted before beginning to work on term papers and reports. The majority of Hispanic/Latinos
(34.6%) indicated that they “often” made sure that they clearly understood what their teachers wanted.

**Learning strategies.** Pressley and Wharton-McDonald (1997) noted that self-regulated learners tend to improve academically by using a variety of learning strategies. With regard to one such strategy, that of retrieving prior knowledge, the majority of African Americans (38.7%) and Hispanic/Latinos (38.5%) indicated that they “often” tried to connect the things they learned in each class with the things they learned in the same classes on previous days. The majority of Asian-Pacific Islanders (50.0%) say that they “sometimes” tried to connect learning from earlier classes. Moreover, the majority of African Americans (38.7%) and Asian-Pacific Islanders (38.9%) indicated that they “sometimes” stopped periodically to review the main points in the material that they just read when reading a long assignment in their textbooks. The majority of Hispanic/Latinos were evenly divided between “sometimes” (38.5%) and “almost always” (38.5%) on this question.

When preparing to answer essay questions, the majority of African Americans (32.3%) and Hispanic/Latinos (42.3%) indicated that they “often” planned the answers to essay questions in their minds before writing them. The majority of Asian-Pacific Islanders (50.0%) indicated that they “sometimes” did so.

**Additional learning strategies.** Bliss (2002) concluded that effective self-regulated study skills and study behaviors for academic preparation include: *proofreading work before it is handed in and organizing.*
Proofreading. According to the participants, the majority of African Americans (35.5%) “sometimes” checked their answers before turning in their test papers, if they had time. The majority of Hispanic/Latinos (44.0%) and Asian-Pacific Islanders (41.2%) indicated that they “often” checked their answers before turning in their test papers, if they had time.

Organization. When asked about organizing, the majority of African Americans (41.9%) indicated that when preparing for a test, they “almost always” studied the material in some logical order. The majority of Hispanic/Latinos (34.6%) and Asian-Pacific Islanders (38.9%) answered that they “often” studied the material in some logical order.

Table 6 summarizes the aggregate mean responses to the items reflected in the survey for skills and study behaviors of students of color as it relates to academic preparation. As indicated in Table 6, the data suggests that the majority of African Americans (33.06%) and Hispanic/Latinos (37.24%) indicated that they are “often” academically prepared. However, the majority of Asian/Pacific Islanders (35.69%) felt that they were “sometimes” academically prepared. Interestingly, the top two percentages of all three groups reflected that they “sometimes” and “often” consider themselves academically prepared.
Table 6

Aggregate Mean Responses to Academic Preparation among Students of Color Summarized

<table>
<thead>
<tr>
<th>Race</th>
<th>Rarely or Never</th>
<th>Sometimes</th>
<th>Often or usually</th>
<th>Always or almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>13.73%</td>
<td>29.46%</td>
<td>33.06%</td>
<td>23.78%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>9.64%</td>
<td>30.0%</td>
<td>37.24%</td>
<td>23.14%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>16.18%</td>
<td>35.69%</td>
<td>32.53%</td>
<td>16.87%</td>
</tr>
</tbody>
</table>

Similarities and Differences in Social Nature among Students of Color

Johnson, Johnson, Stanne, and Garibaldi (1990) concluded that effective study groups yield more productivity and achieve more academically in the form of grades than do individuals. When asked about studying in groups, the majority of African Americans (45.2%), Hispanic/Latinos (44.4%) and Asian-Pacific Islanders (55.6%) indicated that for some subjects, they “sometimes” liked to study with others; this was 47.3% of the total respondents.

As indicated in Table 7, all three groups are willing to study in groups. While Asian/Pacific Islanders were split between (41.70%) “sometimes” and (41.70%) “often” as to whether they would study in a group, the majority of African Americans (45.2%) and Hispanic/Latinos (39.30%) would “sometimes” study in groups. Interestingly, the top two percentages of all three groups reflected that they “sometimes” and “often” are willing to study in groups.

Relative to the differences in social nature among students of color, the majority of African Americans (45.2%) “sometimes” preferred to study alone rather than with
other people. However, the majority of Hispanic/Latinos (42.3%) and Asian-Pacific Islanders (55.6%) “often” preferred to study alone.

Table 7 summarizes the aggregate mean responses to the items reflected in the survey for skills and study behaviors of students of color as it relates to social nature.

Table 7

Aggregate Mean Responses to Social Nature among Students of Color Summarized

<table>
<thead>
<tr>
<th>Race</th>
<th>Rarely or Never</th>
<th>Sometimes</th>
<th>Often or usually</th>
<th>Always or almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>11.30%</td>
<td>45.2%</td>
<td>30.65%</td>
<td>12.90%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>13.75%</td>
<td>39.30%</td>
<td>33.15%</td>
<td>13.75%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>11.15%</td>
<td>41.70%</td>
<td>41.70%</td>
<td>5.55%</td>
</tr>
</tbody>
</table>

Interpretation of Findings

Similar Skills and Study Behaviors among Students of Color

Meta-cognition and self-efficacy. The data suggests that the majority of students of color across the three groups “sometimes” do not know how to study, which affects “their belief in their capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). One factor as to why all three groups “sometimes” do not know how to study is because they simply have not been taught effective study skills and study behaviors.

Relative to similarities in meta-cognition among these students of color, there are three meta-cognitive study skills that can be taught: retrieving prior knowledge, note taking and identifying important information.
According to the data from this study, as it relates to self-efficacy, all three groups expressed areas of low self-efficacy to include worrying about test performance and not being able to think clearly when faced with tests.

*Time management.* The data suggests that the majority of students of color across the three groups had problems with time management. When asked about time management in general all three groups “sometimes” did not use their time well. They spent too much time on some things and not enough on others.

This research suggests that since all three groups sometimes did not know how to study, their self-efficacy was affected, which may be the rational for sometimes procrastinating. However, these self-regulated learners managed to keep all of their materials for each subject together and arranged in some logical or for test preparation.

*Academic preparation.* While there are multiple criteria for admission to the University of California, across all three groups, as it relates to academic preparation, there were areas where skills and study behaviors could be improved. Admittance to University of California could be enhanced for students of color if skills and study behaviors were taught as early as middle school.

For example, identifying important information is a skill that could be taught, however, the majority of African Americans (35.5%), Hispanic/Latino (42.3%), and Asian/Pacific Islanders (38.9%) in the survey indicated that they had to go over written materials several times because the words did not have much meaning the first time they went over them. This could be the result of these students not being exposed to reading materials at home that would have enhanced their vocabulary early in their academic
learning or because the teacher did not teach the necessary skills for sentence interpretation. Nevertheless, being exposed early to skills and study behaviors could enhance academic achievement.

Overall, all three groups struggled within areas of academic preparation to include retrieving prior knowledge, reviewing the main points in the material that they just read, preparing to answer essay questions, and proofreading.

Despite the deficiencies in knowing how to study, these self-regulated learners used multiple learning strategies to achieve desired goals or tasks. They were willing to get clarification and support from the teacher, use what they learned in one subject to help them in other subjects, and study in groups.

Group studying. As it relates to studying in groups, all three groups were willing to study in groups for some subjects. However, the majority of all groups preferred to study alone.

Differences in Skills and Study Behaviors among Students of Color

Meta-cognition and self-efficacy. Relative to differences in meta-cognition among students of color, additional meta-cognitive study skills were discovered that could be taught: being motivated, good organization skills and monitoring comprehension. Some groups did better than others within these areas. However, all groups indicated that they got nervous and confused when taking tests.

Time management. The following areas within time management showed relative differences among students of color: procrastination, planning study time, and prioritizing time. Some groups did better than others within these areas.
**Academic preparation.** The data suggests that African Americans and Asian/Pacific Islanders have trouble within areas of academic preparedness. While the majority of African Americans and Asian/Pacific Islanders indicated that they “sometimes” are academically prepared, the majority of Hispanic/Latinos indicated that they “often” are academically prepared.

**Group studying.** Relative to the differences in social nature among students of color, the majority of African Americans and Hispanic/Latinos would “sometimes” study in groups. However, Asian/Pacific Islanders were split between “sometimes” and “often” as to whether they would study in a group.

As indicated in the literature, Watson, Kendzoir, Dasho, Rutherford, and Solomon (1998) concluded that working in groups fosters an environment in which students can develop their own understanding, engage in new ideas, and challenge each other’s philosophy.

The data suggests that while students are willing to study in groups, due to the fact that they have after-school jobs, they are not able to attend group study. Additionally, the data suggests that there may be a connection consisting of an after-school job, willingness to study in a group, but a preference to study alone. In fact, when asked about their preference to study alone, the majority of African Americans (45.2%) “sometimes” prefer to study alone. However, the majority of Hispanic/Latinos (42.3%) and Asian/Pacific Islanders (55.6%) “often” prefer to study alone.

Chapter 5 presents conclusions and recommendations for future research.
Chapter 5

SUMMARY AND CONCLUSIONS

This chapter summarizes the study, discusses the findings and possible directions for future research. The purpose of this study was to explore the role of skills and study behaviors in students of color who traditionally have low admissions rates to the University of California.

According to Choy, Horn, Núñez, and Chen (2000), one of the key factors that prevents low-income students of color from being admitted to post-secondary schools is academic preparedness. One way to look at the educational preparation of students of color is to focus on study skills and study behaviors.

While the admissions rates for students of color have remained relatively the same during the Pre-Proposition 209 and Post-Proposition 209 era, the demographic makeup of California has shifted. Considering the population trend, the data indicates that not only are ethnic minority groups the majority population in California, but also that ethnic minorities will comprise of nearly 75% of the state population by the year 2050.

The University of California is also cutting freshman enrollment and boosting out-of-state admissions to generate revenue in wake of the on-going budget cuts, which leaves fewer spots for California students. Tuition fee increases for California students will also impact working class and low-income families across the spectrum. Therefore, admission to UC for students of color is further limited.
California’s economy depends on having an educated workforce, and therefore, it is essential that these under-represented students of color gain admission to post-secondary education.

How does the profession increase under-represented students of color admissions into the University of California? In order to arrive at that understanding, this study explored the following questions:

- What are the study skills and study behaviors of the admitted freshmen students of color at UC Davis?
  - What study skills and study behaviors are similar?
  - What study skills and study behaviors are different?

Study skills, as it relates to this study, focus on meta-cognition, self-efficacy, time management, academic preparation, and group study.

This research used a quantitative methods approach. A quantitative Study Behavior Inventory-HS (SBI-HS) by Bliss (2002) was used. The survey contained directions for participants and explained how to complete the inventory. Students were directed to read the 46 statements, which encompassed a Likert scale where students implied the following: “Rarely or never true in my case”, “Sometimes true in my case”, “Often or usually true in my case”, “Always or almost always true in my case.” The inventory took about 15-20 minutes to complete. This inventory is a standardized measure that has been used extensively with college students with no negative effects reported. Additionally, demographic and background data was collected as a separate attachment to the SBI-HS survey.
Summary

Meta-Cognition and Self-Efficacy

According to Perkins (1995), the more information students have in reference to effective learning strategies, the greater their meta-cognition awareness will be. If a student with poor academic performance is aware of how he or she learns and how to control the learning process, this student can improve academically (Zimmerman, 1995).

The data suggests that the majority of students of color across the three groups sometimes did not know how to study. The majority of African Americans, Hispanic/Latino, and Asian-Pacific Islander sometimes felt the following: after reading several pages of an assignment, they can’t remember what they read, they have trouble picking out the things that are important when taking notes, and they sometimes get nervous and confused when taking tests. Moreover, all three groups expressed that sometimes or often they have difficulty with the following: found it difficult to plan their work when faced with a test, putting things down in writing slows them down on reports, essay tests and other work that they have to turn in, they found it hard to pick out important material in reading assignments that will later appear on tests, and sometimes forget names, dates and other details that they really do know. There are six meta-cognitive study skills here that can be taught: retrieving prior knowledge, note taking and identifying important information, being motivated, good organization skills and monitoring comprehension.

Pintrich and DeGroot (1990) revealed that a student’s perceived self-efficacy involves the belief in his or her capabilities to organize and implement a plan; it is also
related to both cognitive strategy use and to self-regulation through the use of meta-cognitive strategies. Self-efficacy as it relates to this study encompasses how people think, feel, and motivate themselves, and ultimately act (Bandura, 1994).

**Time Management**

According to Knapp (1972) time management is another integral part of study behaviors. While students may possess the requisite study skills and study behaviors, if adequate time is not set aside, then having those skills and behaviors are irrelevant.

When asked about time management, the majority of African Americans, Hispanic/Latinos and Asian-Pacific Islander sometimes felt that they do not use their time well. In fact, all three groups either sometimes or often waited until the last minute to write term papers and reports.

In regards to time-allotment schedules, the majority of Hispanic/Latinos and Asian-Pacific Islanders often do not plan their study time well. However, the majority of African Americans felt that they rarely do not plan their study time.

When asked about prioritization of time, the majority of African Americans and Asian-Pacific Islanders sometimes have trouble finding enough time to study because they have an after-school job that takes up too much of their time. However, the majority of Hispanic/Latinos rarely had trouble finding enough time to study because they have an after-school job that takes up too much of their time.

Knapp (1972) reported that there is a relationship between academic achievement and time management. Self-regulated learners use the following study skills and study behaviors as they relate to time management: assess their homework commitments,
develop time-allotment schedules, commitments are assessed in priority order, and time-allotment schedule sets short-term and long-term deadlines.

*Academic Preparation*

According to Pressley and Wharton-McDonald (1997), when students self-regulate their study skills and study behaviors, they tend to improve academically. Self-regulated students use the following study skills and study behaviors for academic preparedness: ask the teacher for assistance when needed and use a variety of learning strategies.

When asked about obtaining teacher assistance, the majority of African Americans often try to meet with the teacher to talk over the problem. However, the majority of Hispanic/Latinos sometimes or rarely try to meet with the teacher to talk over the problem. Moreover, the majority of Asian-Pacific Islanders said they sometimes try to meet with the teacher to talk over the problem.

As noted previously, self-regulated learners tend to improve academically by using a variety of learning strategies. All three groups either sometimes or often did the following as it relates to learning strategies: try to connect the things they learn in each class with the things they learned in the class on previous days, stop at times to review the main points in the material that they just read when they read a long assignment in their textbook, plan the answers to essay questions in their mind before they start writing them, and proofread work before it is handed in. Bliss (2002) concluded that effective self-regulated study skills and study behaviors for academic preparation include: proofreading work before it is handed in and organizing.
Social Nature

Johnson, Johnson, Stanne, and Garibaldi (1990) concluded that effective study groups yield more productivity and achieve more academically in the form of grades than do individuals. When asked about studying in groups on the quantitative survey, all three groups indicated that for some subjects, they sometimes like to study with others. Additionally, the majority of African Americans prefer sometimes to study alone rather than with other people. However, the majority of Hispanic/Latinos and Asian-Pacific Islanders often prefer to study alone rather than with other people.

Researcher Reflections

While, Asian/Pacific Islander/Filipino admissions rates into University of California have remained consistent around 33-35% during Pre-and Post-Proposition 209 periods, they account for only eleven percent of the California population. This researcher assumed that there would be more favorable answers from this particular group as it relates to skills and study behavior. However, the research showed the following regarding Asian/Pacific/Islander/Filipino: they often find it hard to finish work by an assigned time (38.9%), teachers sometimes say their written work is rushed and poorly organized (38.9%), they are often careless with spelling and grammar when answering essay questions (50%), they often find it hard to think clearly when they are faced with a test (50%), although they work until the last possible moment, they often run out of time before they finish tests, and when tests are returned, they often find that their grade has been lowered because of careless mistakes (44.4%).
Suggestions for Further Research

In order for the relationship between academic achievement and the use of appropriate study skills and study behaviors to be optimum, educators must alter the level of students’ use of these skills and behaviors (Horner & Shwery, 2002). Even if educators find it difficult to teach students to use more appropriate study behaviors, the relationship between study skills, study behaviors, and achievement would serve as an identifier of at-risk students who may be experiencing academic difficulties. However, this relationship would be much more useful if there were some intervention programs that could be used to remediate the problem.

As a result of this study’s findings, the following recommendations have been identified for future research.

Further research should look at a skills and study behavior treatment group and one control group to see if academic improvement can be demonstrated. This particular study could be achieved at the middle school level or at high school. Areas for skill and study behavior development would include: retrieving prior knowledge, note taking and identifying important information, being motivated, good organization skills, monitoring comprehension, and group studying.

Further qualitative research should look at whether teachers are available and approachable to students.

Further research should look at the policy implications for requiring all middle school students to attend a skills and study behavior course prior to advancing to high school.
Further research should look at the role of parental influence, or lack thereof, for students of color to go to post-secondary school.

Further research should look at why high school students of color prefer to study alone instead of studying in a group. In other words, what are the perceptions of students of color as it relates to studying in groups? The literature talks about the benefits of working in groups.

Further research should look at the role of peers as it relates to neighborhood casual peers and academic peers of students of color and the relationship to academic achievement.

Further research should look at the relationship, or lack thereof, between the self-efficacy of students and the high school’s culture towards enhancing study skills and study behavior for post secondary education.

Conclusion

The purpose of this study was to explore the role of skills and study behaviors in students of color who traditionally have low admissions rates to the University of California. The results of this study indicated that all groups have opportunities to further develop the necessary skills and study behaviors. In fact, these skills and behaviors can be taught.

Collaborative leaders recognize the importance of a group or team effort to solve organizational problems. At the school site level, this group or team normally involves school administrators, teachers, parents, community leaders, and students (Yukl, 2006).
This research identified several areas for collaborative improvement: skills and study behavior development, self-efficacy, motivation, time management, and group study.

While California continues to grapple with its on-going budget problems, educators, parents, and community leaders still have the responsibility to develop tomorrow’s leaders and ensure that students are academically prepared not only for post-secondary education, but also for a globally competitive world and the multitude of challenges thereafter.
APPENDICES
Appendix A

Human Subjects Protocol

November 30, 2009

To: Willie Armstrong
Doctoral Candidate
Educational Leadership & Policy Studies

From: John Schaeuble, Chair
Committee for the Protection of Human Subjects

Re: Protocol 09-10-043 (Oct)
“The role of skills and study behaviors in the low admissions rates of students of color at University of California”

The Committee for the Protection of Human Subjects conditionally approved your application as “Minimal Risk” at its October 19, 2009 meeting. With the additional materials you have provided, your project is now approved as Minimal Risk.

This IRB approval is with the understanding that you will promptly inform the Committee if any adverse reaction should occur while conducting your research (see “Unanticipated Risks” in the CPHS Policy Manual). Adverse reactions include but are not limited to bodily harm, psychological trauma, and the release of potentially damaging personal information.

The approval applies to the research as described in your application. If you wish to make any changes with regard to participants, materials, or procedures, you will need to request a modification of the protocol. For information about doing this, see “Requests for Modification” in the CPHS Policy Manual.
Your approval expires on November 30, 2010. If you wish to collect additional data after that time, you will need to request an extension for the research. For additional information, see “Requests for Extension” in the CPHS Policy Manual.

If you have any questions, please contact me at 278-6666 or the Office of Research Administration at 278-7565. Thank you.
Appendix B

Consent to Participate in Research (Online)

Investigator’s Name: Willie J. Armstrong  
Department/Telephone: CSU- Sacramento IEDP/ (916) 278-5557

Study Title: The Role of Skills and Study Behaviors in Ethnic Groups With Low Admissions Rates to University of California

You are being asked to participate in research which will be conducted by Willie J. Armstrong, a student in Educational Leadership at California State University, Sacramento. The study will explore the role of skills and study behaviors in ethnic groups that traditionally have low admissions rates to University of California.

You will be asked to complete a questionnaire about your academic study skills, behaviors, relationships with other students, family, and friends. The questionnaire may require 15-20 minutes of your time. At the end of the questionnaire, you will be asked if you are willing to participate in an interview that could last 30-60 minutes, and you will be told how you may contact the researcher to schedule it.

Some people may experience stress or feelings of guilt or embarrassment from thinking or talking about his/her own behavior or attitude, but you have the right to skip any questions you do not want to answer or stop the interview at any time. UC Davis offers Counseling and Psychological Services and can be contacted at (530) 752-0871.

To preserve the confidentiality of your information, your responses will be kept confidential to the degree permitted by the technology used. However, no absolute guarantees can be given for the confidentiality of electronic data. This researcher will have all data stored under lock and key at home and in the personal office. Research documents will be kept confidential in accordance with the law and University policies.

Finally, you will not receive any compensation for participating in this study.

If you have any questions about this research, you may contact Willie Armstrong at (916) 213-1375 or by email at willie.armstrong@yahoo.com. Additionally, my research advisor Dr. Geni Cowan can be reached at (916) 278-6154 or by e-mail at gcowan@csus.edu.

Your participation in this research is entirely voluntary. By completing this survey, you are agreeing to participate in the research. Your acceptance below indicates that you have read, understood, and agree to participate in the research. Please click your choice of whether or not you consent to participate.

I Agree    I Do Not Agree
Appendix C

Online Survey

1. Default Section

Consent to Participate in Research

Investigator's Name: Willie J. Armstrong
Department/Telephone: CSU- Sacramento IEDP/ (916) 278-5557

Study Title: The Role of Skills and Study Behaviors in Ethnic Groups With Low Admissions Rates to University of California

You are being asked to participate in research which will be conducted by Willie J. Armstrong, a student in Educational Leadership at California State University, Sacramento. The study will explore the role of skills and study behaviors in ethnic groups that traditionally have low admissions rates to University of California.

You will be asked to complete a questionnaire about your academic study skills, behaviors, relationships with other students, family, and friends. The questionnaire may require 15-20 minutes of your time. At the end of the questionnaire, you will be asked if you are willing to participate in an interview that could last 30-60 minutes, and you will be told how you may contact the researcher to schedule it.

Some people may experience stress or feelings of guilt or embarrassment from thinking or talking about his/her own behavior or attitude, but you have the right to skip any questions you do not want to answer or stop the interview at any time. UC Davis offers Counseling and Psychological Services and can be contacted at (530) 752-0871.

To preserve the confidentiality of your information, your responses will be kept confidential to the degree permitted by the technology used. However, no absolute guarantees can be given for the confidentiality of electronic data. This researcher will have all data stored under lock and key at home and in the personal office. Research documents will be kept confidential in accordance with the law and University policies.

Finally, you will not receive any compensation for participating in this study.

If you have any questions about this research, you may contact Willie Armstrong at (916) 213-1378 or by email at willie.armstrong@yahoo.com. Additionally, my research advisor Dr. Genti Cowen can be reached at (916) 278-6154 or by email at gcowen@csus.edu.

Your participation in this research is entirely voluntary. By completing this survey, you are agreeing to participate in the research. Your acceptance below indicates that you have read, understood, and agree to participate in the research. Please click your choice of whether or not you consent to participate.

* 1. Your acceptance below indicates that you have read, understood, and agree to participate in this research

  ○ I Agree  ○ I Do Not Agree
2. Demographic Information

2. Are you a Male or Female?
   - Male
   - Female

3. What is your age?

4. What is the highest level of education you have completed?

5. What is your race?

6. What is the highest level of education your mother has completed?

7. What is the highest level of education your father has completed?

3. The Study Behavior Inventory - Form HS

Leonard B. Bliss

This survey is designed to find out what study habits you have developed at this stage of your life. Knowing the results of this inventory can help students develop better and more productive ways to study and help teachers do a better job of teaching.

All of the information in this survey will be kept in strictest confidence, so please be up front and honest in your answers.

The following is a list of statements of habits and attitudes that may affect use of study time and success in schoolwork and study. Please tell us how you behave concerning each of the 46 statements that follow. Do not answer according to what you think you should do or should not do, but according to what you yourself are in the habit of doing. Please answer all 46 questions.

After each statement, you will find columns A, B, C, and D. Mark each item by checking the space in column A, B, C, or D - whichever best describes your behavior. Check each item using the following key:

Column A: Rarely or never true in my case.

Column B: Sometimes true in my case.

Column C: Often or usually true in my case.

Column D: Always or almost always true in my case.

8. I don't use my time well. I spend too much time on some things and not enough on others
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

9. I find it hard to finish work by an assigned time. The work I turn in is often incomplete, poorly done, and handed in late.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always
10. For some subjects, I like to study with others.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

11. I try to use what I learn in one subject to help me in other subjects.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

12. I copy drawings and tables that the teacher puts on the board during class.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

13. I keep my work in school up-to-date by doing my work regularly every day.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

14. I complete and turn in my homework on time.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always
15. I prefer to study alone rather than with other people.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

16. When I begin to study I organize the things I have to do so that I can use my time in the best way possible.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always

17. When I am having trouble in a subject I try to meet with the teacher to talk over the problem.
   - A: Rarely or never
   - B: Sometimes
   - C: Often or usually
   - D: Always or almost always
18. Before I begin to work on term papers and reports I make sure that I clearly understand what the teacher wants before beginning to work.

- A- Rarely or never
- B- Sometimes
- C- Often or usually
- D- Always or almost always

19. When I fall behind in my schoolwork I make up assignments without the teacher having to mention it to me.

- A- Rarely or never
- B- Sometimes
- C- Often or usually
- D- Always or almost always

20. Difficulties in putting things down in writing slows me down on reports, essay tests and other work that I have to turn in.

- A- Rarely or never
- B- Sometimes
- C- Often or usually
- D- Always or almost always

21. My teachers say my written work is rushed and poorly organized.

- A- Rarely or never
- B- Sometimes
- C- Often or usually
- D- Always or almost always

22. I put aside returned tests, homework, and reports without bothering to correct errors that the teacher noted in them.

- A- Rarely or never
- B- Sometimes
- C- Often or usually
- D- Always or almost always
23. I don’t plan my study time very well.
   ○ A: Rarely or never
   ○ B: Sometimes
   ○ C: Often or usually
   ○ D: Always or almost always

24. I try to study so that I will understand the material; not just memorize the facts.
   ○ A: Rarely or never
   ○ B: Sometimes
   ○ C: Often or usually
   ○ D: Always or almost always

25. I wait until the last minute to write term papers and reports.
   ○ A: Rarely or never
   ○ B: Sometimes
   ○ C: Often or usually
   ○ D: Always or almost always

26. I watch too much television and/or play too many video games and this interferes with my studies.
   ○ A: Rarely or never
   ○ B: Sometimes
   ○ C: Often or usually
   ○ D: Always or almost always

27. I have trouble finding enough time to study because I have an after-school job that takes up too much of my time.
   ○ A: Rarely or never
   ○ B: Sometimes
   ○ C: Often or usually
   ○ D: Always or almost always
28. Personal problems with my family make it hard for me to concentrate on my studies.
- A: Rarely or never
- B: Sometimes
- C: Often or usually
- D: Always or almost always

29. I have to go over written materials several times. The words don’t have much meaning the first time I go over them.
- A: Rarely or never
- B: Sometimes
- C: Often or usually
- D: Always or almost always

30. I try to connect the things I learn in each class with the things I learned in the class on previous days.
- A: Rarely or never
- B: Sometimes
- C: Often or usually
- D: Always or almost always

31. I skip over and don’t pay attention to charts, graphs, and tables when reading an assignment.
- A: Rarely or never
- B: Sometimes
- C: Often or usually
- D: Always or almost always
32. After I read several pages of an assignment, I can't remember what I read.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

33. When I read a long assignment in my textbook, I stop at times to review the main points in the material that I just read.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

34. When I take notes during class I have trouble picking out the things that are important. I write down things that turn out not to be very important.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

35. I keep all my material for each subject together and arranged neatly in some logical order.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

36. I prepare for each class session by doing the assignments from the previous meeting of the class.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

37. I get nervous and confused when taking tests. Because of this I don’t answer the questions as well as I could have.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always
38. I find it hard to think clearly when I am faced with a test. Because of this problem I do poorly on tests.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

39. I find it hard to pick out important material in reading assignments that will later appear on tests.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

40. I change answers on multiple choice tests when I actually had the right answer the first time.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always

41. I plan the answers to essay questions in my mind before I start writing them.
   ○ A- Rarely or never
   ○ B- Sometimes
   ○ C- Often or usually
   ○ D- Always or almost always
42. I find it difficult to plan my work when I am faced with a test. Because of this I end up doing poorly on tests.

☐ A- Rarely or never
☐ B- Sometimes
☐ C- Often or usually
☐ D- Always or almost always

43. When preparing for a test I study the material in some logical order such as the order it was presented in class, the order of importance with the most important material first, or the order of the material in time such as the oldest to the most recent.

☐ A- Rarely or never
☐ B- Sometimes
☐ C- Often or usually
☐ D- Always or almost always

44. I am careless with spelling and grammar when answering essay questions.

☐ A- Rarely or never
☐ B- Sometimes
☐ C- Often or usually
☐ D- Always or almost always

45. Although I work until the last possible moment, I run out of time before I finish tests.

☐ A- Rarely or never
☐ B- Sometimes
☐ C- Often or usually
☐ D- Always or almost always

46. If I have time, I check my answers before turning in my test paper.

☐ A- Rarely or never
☐ B- Sometimes
☐ C- Often or usually
☐ D- Always or almost always
47. When tests are returned, I find my grade has been lowered because I made careless mistakes.
   A- Rarely or never
   B- Sometimes
   C- Often or usually
   D- Always or almost always

48. During a test I forget names, dates and other details that I really do know.
   A- Rarely or never
   B- Sometimes
   C- Often or usually
   D- Always or almost always

49. I believe that grades are based on a student's ability to memorize facts rather than on the student's ability to "think things through."
   A- Rarely or never
   B- Sometimes
   C- Often or usually
   D- Always or almost always

50. I study harder for end of year tests (such as final examinations) than for the rest of my schoolwork.
   A- Rarely or never
   B- Sometimes
   C- Often or usually
   D- Always or almost always

51. I think I could do much better on tests if I could take them alone rather than with a group of other students.
   A- Rarely or never
   B- Sometimes
   C- Often or usually
   D- Always or almost always
52. Worry about how will I do interferes with my studying and my performance on tests.
   A. Rarely or never
   B. Sometimes
   C. Often or usually
   D. Always or almost always

53. I think I could do much better on tests if I could take all the time I needed and not feel pressured by a time limit.
   A. Rarely or never
   B. Sometimes
   C. Often or usually
   D. Always or almost always

* 54. This concludes the survey. Thank you! You are also invited to participate in a one-on-one interview. The interview would take approximately 30-60 minutes of your time. If you wish to participate, please contact Willie Armstrong at (916) 213-1375 or willie.armstrong@yahoo.com.

8. This concludes the survey. Thank you!
REFERENCES


Buhler, C. (1968). The developmental structure of goal setting in group and individual studies. In C. Buhler & F. Massarik (Eds.), *The course of human life* (pp. 27-54). New York: Springer


attention becomes counter-productive: Impact of divided versus skill-focused
attention on novice and experienced performance of sensorimotor skills. *Journal
of Experimental Psychology: Applied*, 8, 6-16.

expertise. In N. Hagemann, M. Tietjens, & B. Strauss (Eds.), Die Psychologie der
sportlichen Hochstleistung: The psychology of peak performance in sports (pp.

Bandura, A. (1991b). Self-regulation of motivation through anticipatory and self-
regulatory mechanisms. In R. A. Dienstbier (Ed.), Perspectives on motivation:
Nebraska symposium on motivation, 38, (pp. 69-164). Lincoln: University of
Nebraska Press.


America: A study of family life, hard work, and cultural values*. Ann Arbor: The
University of Michigan Press.

helps at-risk students and students whose parents did not attend college*. New

California Department of Education. Closing the achievement gap: Report of


