Student Success Skills: A Promising Program to Close the Academic Achievement Gap for African American and Latino Students

Academic achievement data from four previous Student Success Skills (SSS) studies were aggregated and examined to determine if there were differential effects in improved test scores among White, Latino, and African American students. Results showed that posttest scores for the treatment group were significantly higher than the comparison group in math as well as reading. There were no interactions or main effects for ethnicity. White, Latino, and African American students showed similar gains after SSS participation.

African American and Latino children continue to lag behind their White counterparts in nearly every academic subject (Flaskin, 2004; Roach, 2004). This unfavorable reality has researchers and policy makers asking questions about the immunity of the academic achievement gap and the existence of effective methods to counteract it (Morgan & Mehta, 2004; Romney, 2003). Obed, Charles, and Bentz (2001) indicated that the “perennial challenge for urban education in the United States is finding effective ways to address the academic achievement gap between African American and White students” (p. 1). Today, their sentiments resonate louder in light of the continued presence of the achievement gap between African American and White children, and a demographic shift that shows Latinos close to surpassing African Americans in numbers (Bok, 2003; U.S. Census Bureau, 2001).

In this article, we refer to children as African Americans when they are Americans of African descent, but are not Latino or Caucasian. We refer to children as Latino when they are of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race. When we cite specific statistics in this article, the descriptor of ethnicity (e.g., Hispanic versus Latino or Black versus African American) reflects the original source.

According to the National Education Longitudinal Study (Ingels et al., 1994), on average, Blacks and Hispanics score lower than Whites in reading and math at the end of eighth grade. A more recent review of academic outcomes continues to reflect significant differences in achievement related to ethnicity, with 39% of White, 12% of Black, and 15% of Hispanic students deemed proficient in reading by the U.S. Department of Education (2005) at the end of eighth grade. In math, 39% of White, 9% of Black, and 13% of Hispanic students were deemed proficient at the end of eighth grade (U.S. Department of Education).

Several efforts have been successful in increasing academic achievement and several interventions have proven effective in closing the academic achievement gap. Notably, a report of the National Study Group for the Affirmative Development of Academic Ability (Bennett et al., 2004) indicated that the most effective approaches to arrest the academic achievement gap may be those that represent a comprehensive and multifaceted tactic. In this study we examine the Student Success Skills program (SSS; Brigman, Campbell, & Webb, 2004; Brigman & Webb, 2004) as an effective intervention to close the academic achievement gap for low-achieving students, a disproportionate number of whom are African American and Latino students, and examine the differential effects of the SSS intervention related to ethnicity.

In previous studies (Brigman & Campbell, 2003; Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb, Brigman, & Campbell, 2005), the SSS program was effective in improving academic performance and closing the academic achievement gap for low- to mid-range-achieving students. Two of the aforementioned studies used experimental designs with random selection and random assignment of students to the SSS program (treatment) and comparison groups. This design is considered the “gold standard” of research design by the U.S. Department of Education (2003) for determining if a particular intervention is responsible for improved outcomes. In the other two studies, students were randomly selected to participate
from treatment and demographically matched comparison schools. Students who participated in the SSS program showed significant positive academic outcomes when compared to students in the comparison groups.

In the present study, we reexamine the SSS data to identify emerging trends related to academic gains achieved by African American and Latino students who participated in the SSS program. Specifically, the present study is guided by one research question: How do Latino and African American students perform compared to their White counterparts on a measure of reading and math achievement following participation in the SSS program? An elemental assumption of this study is that the SSS program is effective in closing the academic achievement gap for low to mid-range-achieving students. We hypothesize that students’ ethnicity will not be a differentiating factor on indexes of academic achievement following participation in the SSS program. In other words, we believe that the SSS program is equally effective for all students independent of ethnicity.

We begin with a description of the SSS program used in previous studies to close the academic achievement gap for low- to mid-range-achieving students. This is followed by a brief explanation of the research design and methodology used in each of the original studies. For the interested reader, the SSS program original studies offer a thorough explanation of the theoretical and empirical basis for the SSS program (see Brigman & Campbell, 2003; Brigman et al., 2007; Campbell & Brigman, 2005; Webb et al., 2005). Next, we discuss the results of the analyses used to address the study’s hypothesis related to ethnicity. Finally, we suggest the direction for future studies and the potential applications of the SSS program to close the academic achievement gap for African American and Latino students.

STUDENT SUCCESS SKILLS

The authors of the original SSS program studies built their research on a strong empirical and theoretical basis with regard to content, delivery, and research design. The SSS program is based on three skill sets consistently identified in extensive reviews of research as contributors to improved academic and social outcomes (Hattie, Biggs, & Purdie, 1996; Masten & Coatsworth, 1998; Wang, Hertel, & Walberg, 1994). These skills sets include (a) cognitive and metacognitive skills such as goal setting, progress monitoring, and memory skills; (b) social skills such as interpersonal skills, social problem solving, listening, and teamwork skills; and (c) self-management skills such as managing attention, motivation, and anger. Further support for these skill sets have been reported by researchers who have linked social and emotional competence to achievement outcomes, including that of students at risk for academic failure (Elias et al., 2003; Marzano, Pickering, & Pollack, 2001; Zins, Weissberg, Wang, & Walberg, 2004).

The Original SSS Studies

Brigman and Campbell (2003), Webb et al. (2005), Campbell and Brigman (2005), and Brigman et al. (2007) used randomized comparison group methodologies repeated across multiple settings to evaluate student outcomes as a result of participating in the SSS program. The original studies included 1,123 students in fifth, sixth, eighth, and ninth grades, from two Florida school districts.

The authors measured academic achievement gains using a standardized, objective, state-wide assessment instrument, the Florida Comprehensive Assessment Test (FCAT). The FCAT Norm Referenced Test (NRT) is a standardized, objective, paper-and-pencil assessment instrument used to assess academic achievement. The FCAT NRT results in indexes of math and reading. Customarily, all 3rd to 10th graders take the FCAT NRT during the spring of each year. The FCAT has been normed based on the scores obtained by 5,171 students who represent Florida’s ethnic groups by including 60.8% White, 20.6% African American, 15.1% Latino, 1.8% Asian American, .18% Native American, and .83% multicultural children. The FCAT NRT has been noted for its psychometric properties. The FCAT technical manual reports Cronbach’s alpha coefficients, indexes of reliability, between .86 and .88 for reading and between .91 and .92 for math. Also, solid coefficients have been reported for the FCAT NRT’s measures of criterion and construct validity. We used the FCAT NRT scale scores from reading and math tests administered in April each year as the premeasures and postmeasures for students in treatment and comparison groups. We considered results to be statistically significant when they met α at least the .05 level.

The SSS Program as an Intervention

In each original SSS program study, trained school counselors delivered the SSS program’s classroom and group interventions using a structured format. Attention was given to fidelity of treatment through extensive training, coaching, the development of a manual for counselor use, and tracking attendance of counselors at training and coaching sessions. In the fall, students participated in classroom lessons implemented to introduce fundamental SSS concepts, and eight 45-minute weekly group sessions. These were followed by four booster sessions beginning in January, spaced about a month apart and preceding the state’s scheduled FCAT NRT administra-
Table 1. SSS Concepts, Tools, and Strategies Introduced and Practiced in Classrooms

Creating a caring, supportive, and encouraging classroom
Participants learn skills for listening and attending, ways to frame positive self-talk, including noticing small improvements toward goals, and ways to encourage peers. These skills are practiced, encouraged, and reinforced throughout the program as participants work to improve academic and social outcomes.

Goal setting, progress monitoring, and success story sharing
Participants are introduced to the “Seven Keys to Course Mastery,” the “Looking Good/Feeling Good Life” skills tools, and grade-monitoring strategies and learn to use the tools to identify successes, patterns, and areas in need of improvement and how to develop plans for improvement.

Cognitive and memory skills
Counselors work collaboratively with teachers to introduce important study-related tasks including how to pick out important information and how to organize/chunk information so it can be more easily studied and remembered. Story structure is introduced as an academic and social/emotional tool.

Performing under pressure: managing test anxiety
Students create their own safe place and learn to use breathing and positive self-talk to improve test performance. Mental practice is introduced as one way to improve performance. Students learn to use test-taking strategies, positive self-talk, and music as additional strategies to help improve performance.

Building healthy optimism
Strategies for developing healthy optimism are realized through positive student storytelling, through the sharing of success stories centered around goals that have been set, and by learning the language of optimism.

Original SSS Program Studies: Results and Findings
In the original SSS program studies, rigorous methodologies and statistical procedures to control for the unwanted influence of certain variables resulted in significant differences between treatment and comparison group means. Students who participated in the SSS program (treatment group) academically outperformed students in the comparison group. In all four studies, treatment group students outperformed comparison students in math. In two studies, treatment students also outperformed comparison students in reading.
Table 2. Means and Standard Deviations on FCAT NRT Reading Scores for the Treatment and Comparison Groups by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Treatment Pretest</th>
<th>Treatment Posttest</th>
<th>Comparison Pretest</th>
<th>Comparison Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>642.5 (27.3)</td>
<td>651.9 (29.1)</td>
<td>650.9 (34.6)</td>
<td>655.5 (29.8)</td>
</tr>
<tr>
<td>Latino</td>
<td>645.9 (26.4)</td>
<td>658.1 (29.4)</td>
<td>640.4 (23.5)</td>
<td>652.2 (27.0)</td>
</tr>
<tr>
<td>White</td>
<td>634.8 (29.7)</td>
<td>650.6 (32.5)</td>
<td>639.1 (24.4)</td>
<td>649.3 (28.5)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviations in parentheses.

Table 3. Means and Standard Deviations on FCAT NRT Mathematics Scores for the Treatment and Comparison Groups by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Treatment Pretest</th>
<th>Treatment Posttest</th>
<th>Comparison Pretest</th>
<th>Comparison Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>631.5 (25.0)</td>
<td>655.5 (28.4)</td>
<td>646.7 (28.0)</td>
<td>658.5 (30.2)</td>
</tr>
<tr>
<td>Latino</td>
<td>634.0 (27.4)</td>
<td>658.2 (32.6)</td>
<td>640.5 (24.1)</td>
<td>650.5 (25.2)</td>
</tr>
<tr>
<td>White</td>
<td>628.0 (29.7)</td>
<td>650.5 (31.2)</td>
<td>639.5 (28.2)</td>
<td>650.6 (27.4)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviations in parentheses.

PRESENT STUDY METHODOLOGY

We used data from 1,123 students—fifth-, sixth-, eighth-, and ninth-grade students who participated in the original S5 program studies. The participants were enrolled in 36 schools from two school districts. Students were approximately evenly divided among rural, suburban, and urban area schools. The students were divided by gender in nearly equal numbers with 54% females and 46% males. The ethnic composition of the total sample included 718 (67.6%) White, 279 (22.3%) African American, and 126 (10%) Latino students.

The study's methodology and hypotheses required a division of participants into treatment and comparison groups—540 participants were randomly assigned to the treatment group and 583 participants were assigned to the comparison group. The ethnic composition of the treatment group was 344 White, 143 African American, and 53 Latino participants. The comparison group was made up of 374 White, 136 African American, and 73 Latino participants.

RESULTS

Before we report the results of the statistical analyses to address the study’s hypothesis, we present the FCAT NRT means and standard deviations for the groups in reading (see Table 2).

Table 3 shows the FCAT NRT means and standard deviations for the groups in math.

A multiple analysis of covariance (MANCOVA) was used to test the study’s hypothesis. The MANCOVA allowed us to compare math and reading posttest scores by holding constant the pretest scores of the same variables. As predicted, the multivariate statistics revealed a significant effect for group (Wilks’ $\lambda = .975$, $F[2, 1114] = 14.126, p < .01, \eta^2 = 0.025$), which suggested that posttest scores on the norm referenced tests in either one (or both) of the treatment groups (i.e., reading or math) were significantly different from the posttest scores of the comparison group.

A follow-up analysis of covariance revealed that when pretest scores were held constant, posttest scores for the math were significantly higher for treatment group students ($F[1, 1115] = 27.611, p < .01, \eta^2 = 0.024$). This finding indicates that the FCAT NRT scores for the treatment and comparison groups in math were significantly different. Likewise, the posttest scores for reading were higher for treatment group students than for those in the
comparison groups at a statistically significant level ($F[1, 1115] = 5.75, p < .05, \eta^2 = 0.005$). Figures 1 and 2 show the pretest and posttest mean scores for the comparison and treatment groups in reading and math, respectively.

While results were significant for treatment group students, our next step was to examine results related to ethnicity. We found no statistically significant differences for ethnicity (Wilks’ $\lambda = .992$, $F[4, 2228] = 2.36, p > .05, \eta^2 = 0.04$). Also, the interaction between the group and ethnicity was not statistically different (Wilks’ $\lambda = .999$, $F[4, 2228] = 2.58, p > .05, \eta^2 = 0.00$), suggesting that regardless of ethnicity, students’ scores improved following participation in the SSS program.

**DISCUSSION**

Several experimental studies have shown the SSS program to be effective at increasing and sustaining the academic achievement of low- to mid-range-performing students (Brigman & Campbell, 2003; Brigman et al., 2007; Campbell & Brigman, 2005; Webb et al., 2005). The aim of the present study was to evaluate the SSS program’s effectiveness related to closing the academic achievement gap for Latino and African Americans students by improving academic outcomes for all low-achieving students regardless of ethnicity. The results show that after SSS program participation, achievement scores in reading and math improve at similar levels for all students. Ethnicity does not appear to be a differentiating factor.

Study design is important in light of the current educational climate of accountability that focuses on student academic achievement outcomes. The U.S. Department of Education (2003) has released guidelines to help educators identify and implement educational practices supported by rigorous evidence of effectiveness. These guidelines include the use of experimental design studies that are repeated across multiple settings. We believe the study design meets Department of Education guidelines, suggesting that the SSS program, as an intervention, is supported by strong evidence of effectiveness. Additionally, the methodology employed in each of the original four studies was independently reviewed at the Center for School Counseling Outcome Research (Carey, 2004) and described as a “rigorous” design. Sink (2005) described the SSS program as one of the few programs that met rigorous research criteria to prove its effectiveness and encouraged the use of the program given its “useful research-based criteria” (p. 14). The National Panel for Evidence-Based School Counseling also has independently reviewed the SSS research and has found strong evidence to support the use of the program as an intervention affecting student achievement (Carey et al., 2005).

Legislative policy, including the federal No Child Left Behind Act (U.S. Department of Education, 2001), focuses on improved achievement outcomes and the enhancement of educational opportunities for all students. Schools are charged with showing that all students make adequate yearly progress. This has led school leaders, educators, and policy makers to examine the effectiveness of interventions directed at disaggregated groups of students, including
groups based on ethnicity, in an effort to increase academic achievement. This study documents the efficacy of a program implemented by school counselors based on theoretical and empirical support for the inclusion of cognitive, social, and self-management skills in improving academic outcomes for all students.

We encourage further studies that focus on the academic achievement gap. Particularly beneficial to the understanding of academic achievement may be longitudinal studies of students who made considerable academic gains, especially those who moved into the “proficient” range on standardized achievement tests such as the FCAT, following multifaceted interventions. Attending to factors that improve academic achievement is relevant for the refinement of programs such as SSS. More importantly, however, longitudinal studies may uncover factors external to academic issues that further narrow the achievement gap for Latino and African American students. For example, the study of acculturation is proven relevant to academic achievement given that cultural transitions influence family functioning. In turn, family dynamics are relevant to students’ academic achievement.

We recommend studies with ethnic minority students given that the academic achievement gap seems influenced by numerous factors not addressed in our study. For example, future studies must address personal, familial, and ecological factors’ influence on academic achievement. Hence, we suggest studies that examine the relationship of aforementioned factors so that interventions may address them within a holistic and comprehensive research paradigm. Also, schools may benefit from those studies to frame multifaceted interventions that include parents and the community.

Last, we are advocates for the positive influence that school counselors have on academic achievement. It appears misguided to support school-based interventions that exclude school counselors. This and other studies lend support to the idea that school counselors are influential in increasing the academic achievement of students independent of the students’ ethnicity and the school setting. Future studies may consider the synergistic effect of content instruction, reading, for example, in combination with the SSS program.

The limitations of the study do not abrogate the relevance of the results. However, certain considerations are in order when evaluating what the results show. For example, this study’s dependent variables may not adequately and fully represent the entire spectrum of academic achievement. The participants were restricted to a low- to mid-achievement range on the FCAT. We consider it possible that inclusion of a wider range of academic achievement scores may alter the results. It also may be important in the development of interventions such as the SSS program to see if students differ in social, metacognitive, and self-management skills in relation to their academic achievement levels. We used two indexes from a standardized, objective, state-mandated test to evaluate academic achievement in math and read-

Figure 2. Treatment and comparison groups, pretest and posttest series, mathematics.
The academic achievement gap is susceptible to erosion by a program that does not focus on academic content but on skills central to all learning.

CONCLUSION

The current study addresses what we feel is an important question: Is there a difference in the achievement outcomes of students who participate in the SSS program related to their ethnicity? The continued examination of the data from previous SSS studies is in direct response to questions that have been raised in critical reviews and national presentations regarding the effectiveness of SSS with ethnic minorities. Showing how school counselors make a difference related to academic and social outcomes for all students is one of the most pressing needs in the school counseling profession.

We close with the following analogy: Imagine a large fishing net. This fishing net is not woven very tightly and the gaps are large. As the fisherman (student) throws out the net and pulls it back in, many of the fish (curriculum) are lost. Now imagine a second fishing net that is woven more tightly (critical skills and strategies that support learning are added). As the fisherman (student) throws out this net and pulls it back in, many more fish (curriculum) are hauled in. As students learn to use the critical skills and strategies introduced and practiced in the SSS program, they become more confident and begin to “haul in” more each time their net is thrown out over the curriculum. They begin to see improvements in their performance and gain confidence in their ability to learn—regardless of ethnicity.

References


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