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An Exploratory Investigation of Structured Writing Strategy Training for African-American College Students With Learning Disabilities

This exploratory study investigated the effects of a structured writing strategy on the quality of expository compositions produced by 36 African-American college undergraduates with learning disabilities. The strategy was structured to assist students in developing a topic sentence and main ideas into body paragraphs, and in using transition words throughout the composition. The strategy effects were compared for a group that received the specific, structured writing strategy training and a control group that received general strategy instruction. Students in the strategy instruction group significantly improved their use of supporting details in producing an expository essay. Although mean writing self-efficacy scores for both groups increased at the end of training, there were no significant differences between groups on a measure of writing self-efficacy.

More students with disabilities

are attending colleges and universities than ever before (Horn & Berktold, 1999; Lewis & Farris, 1999), and post-secondary institutions have the responsibility to provide an environment for optimum academic success for students admitted. According to the HEATH Resource Center of the American Council on Education (Henderson, 2001), approximately two in five college freshmen with disabilities (40%) reported a learning disability. Furthermore, only 16% of freshmen reporting learning disabilities were students of color, 6% of which were African-American. Although this group may be a small percentage of students, exploration of the types of support services that may assist African-American freshmen with disabilities to be successful in college is essential. This study looked at improving the writing strategies of African American students with learning disabilities who were enrolled in a historically black college and university (HBCU).

Learning Strategies

Learning strategies have been applied to academic, social and behavioral learning goals for students with learning disabilities, as well as integrated into student support services programs, especially programs at the secondary and postsecondary levels. Although learning strategies for writing have been taught in postsecondary settings, it is interesting to note that in most cases researchers have simply adapted elementary and secondary strategies to postsecondary settings without critically analyzing the effectiveness of the strategies for postsecondary learners.

Most research in learning strategies for students with learning disabilities has been conducted with the general population of predominantly white, middle class elementary and secondary students. In the absence of a comprehensive research base, one instructional approach that seems promising to address writing deficits of African-American college students with learning disabilities is explicit writing strategy instruction.

In a review of the literature investigating the use of learning strategies with African-American college students with learning disabilities, the results were sparse at best. Researchers have investigated special counseling programs (Trippi & Cheatham, 1989), classroom environmental changes such as racial-development activities (Dawson-Threat, 1997), assessment trends of African-American college students with learning disabilities (Greenberg, 1986), educational achievement (i.e., measured by grade point average and/or retention), and employment (Adelman & Vogel, 1990; Muraskin, 1997; Vogel, 1982; Vogel & Reder, 1998) yet have not investigated a strategic approach to writing strategy instruction.

With regard to studies concentrating on the writing of African-Ameri-

can college students, the focus has been on the integration of minority issues (i.e., reading black feminists' essays to facilitate discourse) in English courses (Comfort, 2000), collaborative learning (Eubanks, 1991), and educational support service programs (Hoy & Gregg, 1986; Vogel, 1982). While the strategic approach has proven to be successful with younger populations (Deshler et al., 1996; Harris & Graham, 1992; Snyder & Pressley, 1990), as well as integrated into support service programs at the secondary and postsecondary levels (Hock, Schumaker, & Deshler, 1995; Hudson, 1994; Muraskin, 1997), one can question whether this research can generalize to African-American college students with learning disabilities.

Self-Efficacy

The term "self-efficacy" was used in this study to refer to participants' pre-task judgments, such as their expectancies of whether they can perform a given task or activity (Bandura, 1997). Efficacy beliefs promote academic achievement both directly and by raising personal goals through life-skill training (Bandura, 1997; Eisenberger, Conti-D'Antonio, & Bertrando, 2000). In addition to strengthening efficacy, academic support for college students with learning disabilities should address a variety of academic and study skills.

Academic Support Services

The goal of academic support services and strategy instruction should be to enhance students' belief in their self-efficacy, the ability to exercise control over academic progress (Eisenberger et al., 2000). Typically, academic support services are designed to include reading comprehension, problem-solving strategies, strategic tutoring, and written composition. Furthermore, although writing strategy instruction for students with learning disabilities is prevalent with students in elementary and secondary grades (Bakken, Mastropieri, & Scruggs, 1997; Deshler, Ellis, & Lenz, 1996; Harris & Graham, 1992; Newcomer & Barenbaum, 1991; Pressley et al., 1990; Raphael & Englert, 1990), knowledge about the effects of writing strategy instruction on specific aspects of writing quality (i.e., clarity, use of supporting details, organization of thoughts, etc.) and writing self-efficacy (i.e., how capable students feel about themselves as writers) of college students with learning disabilities has not been investigated.

Purpose

According to the meta-analysis conducted by Gersten and Baker (2001), the majority of research on learning strategy instruction in writing has

been conducted with students with learning disabilities in first through ninth grade. Most of these strategies have many components and measured effects according to writing conventions and units had the greatest effect on student performance, specifically in the area of written compositions. The purpose of this investigation was to analyze the effects of brief, structured writing strategy instruction on the quality of expository compositions and writing self-efficacy of African-American college students who (a) were eligible for support services for students with learning disabilities, and (b) had completed less than 60 credit hours of college coursework.

Methods

Participants

The 36 participants in this study were randomly selected from current undergraduate students with learning disabilities enrolled at Florida Agricultural and Mechanical University (FAMU), a four-year state HBCU founded in 1887. All participants were African American students with diagnosed learning disabilities due to discrepancies between their aptitude and performance in school, and as such, were receiving academic support services through the Learning Development and Evaluation Center (LDEC) at FAMU for the 2001-02 Academic Year. At the time of this study, over 400 students (graduate and undergraduate) were receiving various academic support services provided by FAMU's LDEC. Participants were drawn from currently enrolled undergraduates, admitted to receive academic support services from the LDEC. The researcher contacted personnel from the LDEC to solicit assistance in contacting potential volunteer participants for the study. Participation in this study provided participants with an opportunity to learn organizational, time management, and learning skills that could potentially assist them in their college courses. All respondents were randomly assigned numbers. These numbers were randomly selected and participants were placed in one of two workshops. The participants' workbooks were then coded according to workshop/experimental group in which they were placed.

Of the 36 research participants, 27 (75%) were male and 9 (25%) were female, ranging from 18 to 27 years of age. Previous performance measures on the Wechsler Adult Intelligence Scale – Revised (WAIS-R) revealed mean scores on Verbal IQ to be 95 (sd = 12.2), Performance IQ to be 96 (sd = 11.7), and Full Scale IQ to be 96 (sd = 11.4); had an average of .92 years in college (sd = .91). Participants' self-reported grade point averages (GPA) revealed that 26 (72.2%) had an approximate GPA of 2.5 or above. Upon entrance into the LDEC program, students completed the Learning and Study Strategy Inventory (LASSI, Wein-

stein, Palmer, & Schulte, 1987) to assist staff in designing individualized support services. LASSI scores for the entire sample studied revealed that over 65% of participants scored below the 50th percentile in Motivation (24.6%), Selecting Main Ideas (27.5%), and Test Preparation (30.8%). The demographics were collected to provide researchers with descriptive information for purposes of distinguishing differences and similarities between participants in each group prior to this study. The multivariate test for between group means, controlling for age, was not statistically significant [$F(14, 20) = .73$, $p = .73$; Wilks' Lambda = .66.] Thus, there was no significant difference between the General Training and Strategy Training group on the measures of age, intelligence, GPA and LASSI scores.

Instrumentation

Strategy instruction in this study was designed to change the (a) quality of expository writing (i.e., clarity, details, organization and mechanics), and (b) writing self-efficacy (i.e., participants' confidence in their writing abilities and their attitudes toward composing) of African-American postsecondary students with learning disabilities. Thus, the researcher developed and used two instruments: (a) a Holistic Scoring Rubric (see Appendix A), and (b) a Self-Efficacy Scale (see Appendix B) modeled after the Self-Efficacy Scale developed by Harris and Graham (1992).

Holistic Scoring Rubric for Writing Quality. The Holistic Scoring Rubric was used to rate certain dimensions or sub-scales of the quality of participants' written compositions. The scoring rubric was comprised of five analytic sub-scales: (a) Clarity, (b) Supporting Details, (c) Organization, (d) Mechanics, and (e) Global Composition Score. Each sub-scale within the rubric evaluated a writing sample using a six-point scale from one, signifying a composition is poor in quality, to six, indicating the composition is of highest quality. These five sub-scales were summed to yield an overall rating. The total possible rubric score ranged from low (5) to high (30).

Observer Training. Previously written first draft expository compositions produced by college students with learning disabilities were used to train two graduate education professionals who served as agreement observers in this study. The researcher and the professionals independently scored a composition, compared their ratings for each of the five sub-scales and the total score, and discussed any discrepancies. Training was completed when at least 80% agreement was reached for both sub-scale and total scores.

Inter-Scorer Agreement. Inter-scorer agreement was determined by comparing the sub-scale rubric scores assigned by the trained profes-

sionals. Twenty-percent (28%) of the writing samples (n = 8) produced by research participants were randomly selected and inter-observer reliability of the scoring rubric for these samples was computed. Inter-scorer agreement was 82.5. The second method of looking at inter-scorer agreement was by examining the observer rating differences between scores, specifically the number of times observations fell within one point of each other.

Writing Self-Efficacy Scale. The term "self-efficacy" was used to refer to participants' pre-task judgments, such as their expectancies of whether they can perform a given task or activity (Bandura, 1997). In other words, individuals who believe they are capable of successful performance are likely to choose challenging activities, work hard and persist when difficulties are encountered. The purpose of the self-efficacy scale (see Appendix B) used in this study was to measure short-term changes in participants' attitudes toward writing before and after instructional training. The Self-Efficacy Scale (Harris & Graham, 1992) was developed to measure short-term changes in self-efficacy in studies using a pre/post instruction methodology. The researcher used the Self-Efficacy Scale (Harris & Graham, 1992) to assess the short-term changes in writing self-efficacy of postsecondary students with learning disabilities.

The self-efficacy scale is comprised of eight questions. Each question within the scale evaluates a participant's writing self-efficacy using a range from one, signifying an answer of "Strongly Disagree", to five, indicating an answer of "Strongly Agree." Some items included in the questionnaire were worded in a negative direction. Participants' responses for each question prior to, and following, instruction were tabulated and analyzed. Descriptive statistics for those participants who received training and for those who did not receive training in the structured writing strategy were compared across both pre-treatment and post-treatment measurement occasions and similarities, changes, patterns, and trends were described. While the meaning and essence of the questions were retained, the wording of the questions was slightly modified on the post-treatment measure to create a comparable instrument. As shown in Appendix B, pre-instruction question one read, "When writing a paper, it is easy for me to get ideas." Post-instruction question one was changed to read, "When writing this paper, it was easy for me to get ideas."

Reliability of the Self-Efficacy Scale. The test-retest reliability coefficient for the Self-Efficacy Scale (Harris & Graham, 1992) was determined to be .80 among 26 sixth grade students prior to their study (Graham & Harris, 1989). In addition, the internal-consistency reliability coefficient for the scale was .76 among 22 students in this study. As measured by

their scale, Graham and Harris (1989) concluded that there was a link between boosts in perceived self-efficacy and sustained involvement in writing tasks. The test-retest reliability coefficient for the adapted self-efficacy scale used in this study was .78 for this population.

Methodological Procedures

Participants in both groups (experimental and control) received instruction of using strategies in time management, taking lecture notes, taking notes from a textbook and test preparation. The experimental group also received specific, step-by-step instruction in the use of a three-phase writing strategy. Effects of a structured writing strategy on quality and self-efficacy were compared for the two groups: (1) one experimental group, who received training in the use of a structured, three-phase writing strategy template for expository compositions; and (2) one control group, who received general writing strategy instruction.

Training Workshops

Booklets containing demographic and consent forms, worksheets, holistic scoring rubric, self-efficacy scale, and other necessary forms were distributed to each participant. Because they included data collection materials, all booklets were collected following instruction. However, participants were given separate copies of handouts with general information about study skills to take home following the instruction. Prior to the beginning of each workshop, participants were asked to provide demographic information such as age, gender, and estimated grade point average. This information was collected for descriptive purposes to distinguish between-group differences before the completion of the workshops. As well, each participant completed a writing self-efficacy questionnaire (5 minutes) and an expository writing sample (20 minutes) both prior to, and immediately following their workshop.

There were a total of two workshops, each approximately 80 minutes in length. One control workshop (the General Training group) and one training workshop (the Strategy Training group) were conducted. Both groups received general information about postsecondary supports, time management skills, reading, writing and test-preparation strategies for college courses and strategic learning approaches for postsecondary students. In addition to these learning and study strategies, Strategy Training participants were given explicit instruction as to how to develop expository compositions to include details for clarity, supporting details of main ideas, overall text organization, and mechanics appropriate for postsecondary compositions. This was the essential difference between the workshops – 20 minutes of general instruction and a 60-minute in-

teractive "lesson" in the use of a structured writing strategy for planning expository compositions. This instruction provided detailed information for integrating clarity, supportive details, organization and mechanics into writing expository compositions.

General Training Workshop. Participants were led in an 80-minute lecture and general discussion of postsecondary supports including learning strategies, study skills and writing for college students. Learning and study strategies included in the general discussion were time management skills, reading information from textbooks, planning writing compositions, taking notes from a lecture and preparation for college essay examinations. At the end of the lecture and discussion, each participant was again asked to write for 20 minutes to complete another expository writing sample and complete another self-efficacy questionnaire. Demographic information, writing samples, and research instruments were collected in the booklets at the end of instruction.

Strategy Training Workshop. Following a 20-minute brief discussion of general learning strategies, participants were led in a scripted 60-minute interactive training in the use of a structured writing strategy developed by the researchers entitled the "I-Plan" (Appendix C). The strategy training required that participants complete three writing phases: (a) brainstorming, (b) formatting, and (c) writing a first draft. Each phase was designed to compliment the other in assisting participants to complete a well-designed first draft of an expository composition. All three phases were modeled by the instructor and explicitly taught during training. Examples of completed phases were provided in each training workbook. Participants were taught to use all phases to generate a first draft for an expository composition. As well, participants were given a self-evaluation rubric for evaluating their performance on each phase of the structured writing strategy.

Phase 1—Brainstorming. The purpose of this phase was to generate ideas (brainstorm) for written compositions. Participants were instructed to write down ideas pertaining to a specific topic for an expository composition. While there was no required structure or format for the brainstorming, participants were encouraged to write down at least six ideas for the topic. At the end of this phase, participants were instructed to choose three of their thoughts as the three main ideas of their composition. Participants were instructed to draw a circle around these written ideas and encouraged to use all of their brainstorming ideas throughout the training.

Phase 2—Format. The purpose of this phase was to use a structured format (see Appendix C) for outlining an expository written composition. For this phase, participants were given examples of previously

completed formats to use as guides in their writing. First, participants were instructed to generate a topic sentence for their composition. Then, they were instructed to transfer the three main points from Phase 1 to the top and body of their format. Participants were provided with a list of transition words. These words were used to move from one main idea to another within a composition. Participants were instructed to choose transition words for their composition and write these words in the format. At the completion of this phase, participants outlined their expository composition, complete with a topic sentence, main supporting ideas, and transition words. Participants were given a checklist to evaluate their use of the format (see Appendix C).

Phase 3—First Draft. The purpose of this phase was to write a first draft for an expository composition using the ideas generated in Phase 1 and the format from Phase 2. Participants were provided with examples of previously generated first drafts. These drafts served as models of how to transfer the ideas from Phase 1 and use the format from Phase 2 to write a first draft. Participants used the checklist to evaluate their first drafts.

Data Analyses

Writing samples and writing self-efficacy questionnaires were collected from each participant prior to and following instruction. The pre- and post-instruction rubric scores (sub-scale and total rubric scores) and pre- and post-instruction writing self-efficacy scaled scores were analyzed for each participant.

For each participant, the scores for each of the eight questions were tabulated. Group means and ranges were calculated. Analysis of variance (ANOVA) was used to analyze the data because it involves a multiple regression model in which the study factors of interest (i.e., post-instruction rubric scores) were all treated as continuous/interval variables. Since the rubric was designed to measure five distinct aspects of writing quality, a series of ANOVA were deemed to be the appropriate method to test group differences. Furthermore, an analysis of variance organizes and directs the analysis, allowing easier interpretation of results. Most importantly, the major advantage of using ANOVA rather than multiple t-tests is that it reduced the probability of a Type-I error.

Results

Writing Quality Results

The Holistic Rubric scores for each sub-scale were considered either in the low range (i.e., score of 1, 2, or 3) or the high range (i.e., score of 4, 5, or 6). Following strategy instruction, the Strategy Training Group had

Table 1
Measures of Central Tendency of Pre- and Post-Instruction Writing Quality Scores

		Strategy Training *(n = 18)*		
Sub-Scale		Pre-Test	Post-Test	Change
Clarity	Mean	3.78	3.78	0
	sd	1.70	1.63	
Supporting Details	Mean	3.78	4.11	+ .33
	sd	1.70	1.60	
Organization	Mean	3.89	4.11	+ .22
	sd	1.68	1.57	
Mechanics	Mean	2.89	3.22	+ .33
	sd	1.60	1.86	
Global Composition	Mean	3.39	3.61	+ . 22
	sd	1.85	1.46	

Note. sd = standard deviation.

higher holistic scores (i.e., more scores of 4, 5, or 6 on the rubric) than the General Training Group; Global Composition scores in the high range (i.e., scores of 4, 5, or 6 on the rubric) for the Strategy Training Group increased from 7 (38.9%) to 8 (44.4%). In contrast, Global Composition scores for the General Training Group decreased from 10 (55.5%) to 6 (33.3%) after participation. With the exception of Clarity (that remained the same), average scores for the Strategy Training Group increased on all other subscales (see Table 1). Furthermore, average scores for the General Training Group decreased on all subscales. More specifically, the Strategy Group mean increased (+ .33) from 3.78 to 4.11 and the General Group mean decreased (- .89) from 4.33 to 3.44.

Consistent with the research paradigms of Graham and Harris (1989) and resulting suggestions of the meta-analysis by Gersten and Baker (2001) the five items on the Holistic Scoring Rubric were analyzed using total scores and individual subscale scores. Individual item analyses were also emphasized in this investigation in order to yield a greater level of utility and applicability to practitioners. The analysis on the totaled

Table 1 continued

General Training *(n = 18)*			Total Group *(N = 36)*	
Pre-Test	Post-Test	Change	Pre-Test	Post-Test
4.33	3.28	- 1.05	4.06	3.53
1.28	1.67		1.51	1.65
4.33	3.44	-.89	4.06	3.78
1.33	1.34		1.53	1.49
4.33	3.67	-.66	4.11	3.89
1.41	1.28		1.55	1.43
3.72	3.06	-.66	3.47	2.97
1.60	1.80		1.73	1.68
4.06	3.28	-.78	3.72	3.44
1.51	1.23		1.70	1.34

rubric scores did not reveal significant differences between groups ($F = 3.78$, p-value = .060, $p = < .05$).

Writing quality was also measured using five different sub-scaled scores from a holistic scoring rubric: (a) clarity, (b) supporting details, (c) organization, (d) mechanics, and (e) global composition.

As displayed in Table 2, ANOVA results indicate there was no significant difference between groups in the writing quality scores from pre-instruction to post-instruction in Clarity, Organization, Mechanics or Global Composition. Following strategy training, a significant difference in writing quality was found in use of Supporting Details between participants who received I-Plan training and the group that was not trained ($F = 4.46$, p-value = .043, $p < .05$). The Strategy Group mean increased (+ .33) from 3.78 to 4.11 and the General Group mean decreased (- .89) from 4.33 to 3.44. In summary, compared to general training participants, those who received strategy training significantly improved their use of Supporting Details in their expository essays.

Table 2
Results of Six Analyses of Variance of Writing Quality Scores

ANOVA #	Rubric Scale	*F*-ratio	*p*-value
1	Clarity	3.78	.061
2	Supporting Details	4.46	.043*
3	Organization	2.63	.114
4	Mechanics	0.032	.859
5	Global Composition	3.36	.076
6	Total Rubric Scores	3.78	.060

*$p < .05$.

Table 3
Measures of Central Tendency of Pre- and Post-Instruction Self-Efficacy Scores

		Strategy Training *(n = 18)*		General Training *(n = 18)*		Total Group *(N = 36)*	
Question #		pre	post	pre	post	pre	post
1. When I write my next paper, it will be easy for me to get ideas.	Mean	3.33	3.89	3.28	3.33	3.31	3.61
	sd	0.91	0.96	1.27	0.91	1.09	0.96
2. When I write my next paper, it will be hard for me to organize my ideas.	Mean	2.89	2.28	3.00	2.83	2.94	2.56
	sd	1.13	0.57	3.00	0.79	1.17	0.73
3. When I write my next paper for a class, I feel mine will be one of the best.	Mean	3.17	3.39	2.67	3.22	2.92	3.31
	sd	0.99	1.14	1.08	1.00	1.05	1.06
4. When I write my next paper, it will be easy for me to get started.	Mean	3.17	4.11	2.50	3.33	2.83	3.72
	sd	0.99	0.68	1.29	0.97	1.18	0.91

5. When I write my next paper, it will be easy to make all of the changes I need to make.	Mean *sd*	3.28 0.75	3.44 0.86	2.33 1.03	3.06 0.80	2.81 1.01	3.25 0.84
6. When I write my next paper, it will be easy to write my ideas into good paragraphs.	Mean *sd*	3.50 1.04	3.89 0.96	3.06 0.94	3.39 0.78	3.28 1.00	3.64 0.90
7. When I write my next paper, it will be easy for me to keep the paper going.	Mean *sd*	3.39 0.85	3.61 0.92	2.78 1.40	3.39 0.92	3.08 1.18	3.50 0.91
8. When I write my next paper, it will be hard for me to correct my mistakes.	Mean *sd*	2.89 1.02	2.50 0.71	2.78 1.11	2.78 1.11	2.83 1.06	2.64 0.93
Total Sum of Scores	Mean *sd*	26.00 2.85	27.11 3.03	22.39 5.20	25.33 3.40	24.19 4.52	26.22 3.30

Note. sd = standard deviation.

Writing Self-Efficacy Results

Mean writing self-efficacy scores for both groups increased at the end of training (see Tables 3 and 4). For the total 36 subjects in the study, pre-instruction self-efficacy total sum of scores averaged score of 24.19 (*sd* = 4.52). Post-instruction self-efficacy scores increased, yielding a slightly higher average score of 26.22 (*sd* = 3.30). Based on analysis of variance between the means of pre-instruction and post-instruction total self-efficacy scores, the total writing self-efficacy results were not statistically significant ($F = .254$; $p = .216$). Thus, there was no statistically significant difference in writing self-efficacy between participants who received strategy instruction and those who did not receive instruction in the use of the writing strategy format.

Discussion

Following training, participants in the Strategy Training group increased their writing quality (scores of 4, 5 or 6) in the areas of Clarity, Organiza-

Table 4
Frequencies(f) and Percentages(%) of Pre- and Post-Instruction Writing Self-Efficacy Scores

		Strategy Training *(n = 18)*	
		Pre-Test *f* (%)	Post-Test *f* (%)
Q1	1. Strongly Disagree	-	-
	2. Disagree	4(22.2)	3 (16.7)
	3. Unsure	5(27.8)	-
	4. Agree	8(44.4)	11(61.1)
	5. Strongly Agree	1(5.6)	4 (22.2)
Q2	1. Strongly Disagree	1(5.6)	-
	2. Disagree	8(44.4)	14(77.8)
	3. Unsure	2(11.1)	3(16.7)
	4. Agree	6(33.3)	1(5.6)
	5. Strongly Agree	1(5.6)	-
Q3	1. Strongly Disagree	1(5.6)	1(5.6)
	2. Disagree	3(16.7)	3(16.7)
	3. Unsure	7(38.9)	5(27.8)
	4. Agree	6(33.3)	6 (33.3)
	5. Strongly Agree	1(5.6)	3 (16.7)
Q4	1. Strongly Disagree	-	-
	2. Disagree	6(33.3)	-
	3. Unsure	4(22.2)	3(16.7)
	4. Agree	7(38.9)	10(55.6)
	5. Strongly Agree	1(5.6)	5(27.8)
Q5	1. Strongly Disagree	-	1(5.6)
	2. Disagree	3(16.7)	-
	3. Unsure	7(38.9)	8(44.4)
	4. Agree	8(44.4)	8(44.4)
	5. Strongly Agree	-	1(5.6)
Q6	1. Strongly Disagree	1(5.6)	1(5.6)
	2. Disagree	2(11.1)	-
	3. Unsure	4(22.2)	3(16.7)
	4. Agree	9(50.0)	10(55.6)
	5. Strongly Agree	2(11.1)	4(22.2)
Q7	1. Strongly Disagree	-	1(5.6)
	2. Disagree	4(22.2)	1(5.6)
	3. Unsure	3(16.7)	3(16.7)
	4. Agree	11(61.1)	12(66.7)
	5. Strongly Agree	-	1(5.6)
Q8	1. Strongly Disagree	1(5.6)	-
	2. Disagree	6(33.3)	4(22.2)
	3. Unsure	3(16.7)	8(44.4)
	4. Agree	8(44.4)	5(27.8)
	5. Strongly Agree	-	1(5.6)

Note: The wordings for question #2 and #8 were reversed, so higher scores indicate lower self-efficacy.

General Training *(n = 18)*		Total Group *(N = 36)*	
Pre-Test *f* (%)	Post-Test *f* (%)	Pre-Test *f* (%)	Post-Test *f* (%)
2(11.1)	1(5.6)	2(5.6)	1(2.8)
3(16.7)	1(5.6)	7(19.4)	4(11.1)
4(22.2)	8(44.4)	9(25.0)	8(22.1)
6(33.3)	7(38.9)	14(38.9)	18(50.0)
3(16.7)	1(5.6)	4(11.1)	5(13.9)
4(22.2)	-	5(13.9)	-
7(38.9)	6(33.3)	15(41.7)	20(55.6)
4(22.2)	10(55.6)	6(16.7)	13(36.1)
3(16.7)	1(5.6)	9(25.0)	2(5.6)
-	1(5.6)	1(2.8)	1(2.8)
2(11.1)	2(11.1)	3(8.3)	3(8.3)
7(88.9)	-	10(27.8)	3(8.3)
5(27.8)	9(50.0)	12(33.3)	14(38.9)
3(16.7)	6(33.3)	9(25.0)	12(33.3)
1(5.6)	1(9.6)	2(5.6)	4(11.1)
5(27.8)	1(5.6)	5(13.9)	1(2.8)
5(27.8)	2(11.1)	11(30.6)	2(5.6)
3(16.7)	6(33.8)	7(19.4)	9(25.0)
4(22.2)	8(44.4)	11(30.6)	18(50.0)
1(5.6)	1(5.6)	2(5.6)	6(16.7)
4(22.2)	1(5.6)	4(11.1)	2(5.6)
7(38.9)	2(11.1)	10(27.8)	2(5.6)
4(22.2)	10(55.6)	11(30.6)	18(50.0)
3(16.7)	5(27.8)	11(30.6)	13(36.1)
-	-	-	1(2.8)
1(5.6)	1(5.6)	2(5.6)	2(5.6)
4(22.2)	-	6(16.7)	-
6(33.3)	8(44.4)	10(27.8)	11(30.6)
7(38.9)	9(50.0)	16(44.4)	19(52.8)
-	-	2(5.6)	4(11.1)
4(22.2)	-	4(11.1)	1(2.8)
4(22.2)	3(16.7)	8(22.2)	4(11.1)
5(27.8)	7(38.9)	8(22.2)	10(27.8)
2(11.1)	6(33.3)	13(36.1)	18(50.0)
3(16.7)	2(11.1)	3(8.3)	3(8.3)
1(5.6)	-	2(5.6)	-
7(38.9)	4(22.2)	13(36.1)	8(22.2)
5(27.8)	5(27.8)	8(22.2)	13(36.1)
3(16.7)	6(33.3)	11(30.6)	11(30.6)
2(11.1)	3(16.7)	2(5.6)	4(11.1)

tion, and Global Composition. In comparison, writing scores (scores of 4, 5 or 6) for participants in the General Training group decreased in all five subscales. While the General Training group had a discriminating consciousness of their writing skills, from a pedagogical perspective, the general training did not teach them specific skills to enhance their performance (specifically with regard to Organization; see Table 2). Furthermore, in addition to heightened awareness and sensitivity to their writing skills, the Strategy Training group was also taught specific skills to improve their writing (specifically with regard to Supporting Details; see Table 2).

According to the assessment data, the participants in the General Training group were more intelligent (i.e., though not significantly different, WAIS-R scores were higher for the General Training group), and slightly more anxious, and potentially more self-critical (i.e., though not significantly different, the General Training group scores were lower in all 10 subscales of the LASSI). Therefore, the General Training group was potentially more sensitive and aware of their abilities. An additional explanation for this finding is that, despite the Strategy Training group participants' lower verbal and reading abilities and already had higher perceptions of their learning and study strategies; they felt they were more prepared to integrate a specific writing strategy into preparing their next composition.

Compared to the participants in the General Training group, participants in the Strategy Training group were more optimistic, had a more positive attitude, and expressed more confidence in their preparation for writing their next paper. On the other hand, for the participants in the General Training group, self-criticalness appears to have remained the same and there was no positive increase in their attitudes toward completing their next writing assignments. While this research offers credible evidence for the validity and veracity of learning strategy training, it also questions the extent to which brief, generalized training should be offered to this targeted population.

Conclusions

The purpose of this exploratory study was to analyze the effects of a brief, structured writing strategy training on the expository compositions and writing self-efficacy of African-American college students with documented learning disabilities who had completed less than 60 credit hours of college coursework at a HBCU. Importantly, it appeared that the 36 subjects in this investigation were representative of the age, intelligence level, and academic performance of typical undergraduate, postsecondary students with learning disabilities. In other words, participants in this

study were very similar to the HEATH (Henderson, 2001) study survey respondents in terms of age and academic demographics.

This study demonstrates the effectiveness of brief, structured writing strategy training for African-American college students with learning disabilities. The difference in supporting details of compositions between those participants who attended strategy training and those who did not was statistically significant. The strategy training was specifically designed to increase the integration of supportive details in compositions. The significant difference in supporting details was not surprising because the training was designed to address this aspect of quality. For example, the first phase, brainstorming, was designed to teach participants how to put detailed ideas on paper. The strategy phases were structured to provide for integration of three details for every main point, as well as three details in both the introductory and concluding paragraphs. In effect, the training did what it was designed to do.

In conclusion, this study found that brief, strategic writing instruction significantly improved the use of supporting details in a composition for African-American college students with learning disabilities at a HBCU. The instruction made no difference in four concepts that were not explicitly addressed in the instruction: (a) clarity, (b) organization, (c) mechanics, and (d) global/holistic quality of compositions.

Recommendations for Future Research and Practice

Future implementation of this writing strategy instruction should explicitly address the concepts of clarity, organization, and mechanics. The addition of these particular components, or mini-lessons per se, in each of these areas could further expand strategy training to address the specific needs of college undergraduates with learning disabilities. In addition, this training and instruction should be expanded so the topics addressed directly correspond to the sub-scales of the rubric. For example, the rubric was designed to be analytical with regard to evaluating the effect of I-Plan writing strategy training on specific aspects of expository compositions (i.e., clarity, supporting details, organization, mechanics and global composition).The scoring rubric should be reflective of what was *explicitly* taught during training.

Future research design and should validate a learning strategy and corresponding training for African-American college undergraduates with learning disabilities that would explicitly address clarity, organization, mechanics and global aspects of writing quality of expository compositions. This information could be used to possibly change strategy and study skills curricula, instruction, and support services for college undergraduates with learning disabilities.

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Appendix A

Holistic Scoring Rubric for Writing Quality

Clarity

A well-executed composition has a topic that is clear and well-defined throughout the text. The composition has a unified opening and summary. This score also reflects how the participant remained focused on the expository topic. The rating scale for evaluating the clarity of an expository composition ranges from 1 (lowest) to 6 (as the highest).

Clarity Score 1 2 3 4 5 6

Supporting Details

A good composition contains details that support the main idea and sub-points. The details provide information about who, what, when, where, why, and how. Additional information can be provided through the use of explanations, examples, reasons, and descriptions. The rating scale for evaluating the use of supporting details within an expository composition ranges from 1 (lowest) to 6 (as the highest).

Supporting Details Score 1 2 3 4 5 6

Organization

A well-organized composition exhibits a well-thought-out plan of development including and introductory paragraph, body paragraphs, and a definite conclusion. The ideas are logically sequenced and related and are in correctly constructed paragraphs. The length of the composition should reflect the grade level and expository style of writing. The rating scale for evaluating the organization of an expository composition ranges from 1 (lowest) to 6 (as the highest).

Organization Score 1 2 3 4 5 6

Mechanics

A good composition has correct spelling, sentence structure, paragraphing, grammatical usage, punctuation, and capitalization. Major errors are those that interfere with communication and include mechanics that a participant should have mastered upon entering college. In contrast, minor errors do not interfere with communication. Major errors should be weighed more heavily in this score. The rating scale for evaluating the mechanics of an expository composition ranges from 1 (lowest) to 6 (as the highest).

Mechanics Score 1 2 3 4 5 6

Global Composition

The purpose of the global composition score is to form a holistic, overall assessment of how adequately the participant preformed the specific writing task. The scorer should rate the paper from beginning to end to make an assessment of how the participant met the requirements of the previously mentioned features. In other words, the global composition score reflects the scorer's overall impression of the composition after considering clarity, supporting details, organization, and mechanics. The rating scale for evaluating the global, holistic quality of an expository composition ranges from 1 (lowest) to 6 (as the highest).

Global Composition Score 1 2 3 4 5 6

Appendix B

Writing Self-Efficacy Scale

1	2	3	4	5
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

1. When writing a paper, it is easy for me to get ideas.

1. When writing this paper, it was easy for me to get ideas.

2. When writing a paper, it is hard for me to organize my ideas.

2. When writing this paper, it was hard for me to organize my ideas.

3. When my class is asked to write a paper, mine is one the best.

3. When I was asked to write this paper, mine was one the best.

4. When writing a paper, it is easy for me to get started.

4. When writing this paper, it was easy for me to get started.

5. When writing a paper, I find it easy to make all of the changes I need to make.

5. When writing this paper, I found it easy to make all of the changes I need to make.

6. When writing a paper, it is easy for me to write my ideas into good paragraphs.

6. When writing this paper, it was easy for me to write my ideas into good paragraphs.

7. When writing a paper, it is easy for me to keep the paper going.

7. When writing this paper, it was easy for me to keep the paper going.

8. When writing a paper, it is hard for me to correct my mistakes.

8. When writing this paper, it was hard for me to correct my mistakes.

Appendix C
Writing Strategy Format and Scoring Sheet

Writing Strategy Format	Format Scoring Sheet
Topic Sentence _____ _____ _____ 1. _____ 2. _____ 3. _____ Transition_____ 1._____ * _____ * _____ * _____ Transition_____ 2._____ * _____ * _____ * _____ Transition_____ 3._____ * _____ * _____ * _____ Transition _____ 3. _____ 2. _____ 1. _____ Restate Topic Sentence _____ _____ _____	**Introductory Paragraph** • Has a topic sentence • yes /no • Lists 3 details • yes/no **Body** • Has 3 paragraphs • yes/no Paragraph One • States a main idea • yes/no • Transition word listed • yes/no • Has 3-detail supports • yes/no Paragraph Two • States a main idea • yes/no • Transition word listed • yes/no • Has 3-detail supports • yes/no Paragraph Three • States a main idea • yes/no • Transition word listed • yes/no • Has 3-detail supports • yes/no **Final Paragraph** • Transition word(s) listed • yes/no • Restates each main point from introductory paragraph • yes/no

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