DOCUMENT RESUME

ED 355 236 TM 019 512

AUTHOR Confer-Owens, Vera A.

TITLE Effectiveness of Suggestive-Accelerative Learning Techniques in Teaching Underprepared College Freshmen.

PUB DATE Nov 92

NOTE 15p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (21st, Knoxville, TN, November 11-13, 1992). Tables contain extremely small print.

PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Brain Hemisphere Functions; *College Freshmen; Comparative Analysis; Higher Education; *Instructional Effectiveness; *Learning Strategies; Music; Pretests Posttests; Relaxation Training; *Student Attitudes; Student Motivation; *Study Skills; *Teaching Methods; Technical Institutes; Time Management

IDENTIFIERS Learning and Study Strategies Inventory; *Suggestology

ABSTRACT

Two methods to teach study skills to underprepared college freshmen at a two-year technical institute were compared. The effectiveness of using a traditional method was compared to that of the Suggestive-Accelerative Learning Techniques (SALT) method, a holistic method that attempts to engage both sides of the brain by creating a positive learning environment through the use of music and relaxation. Ninety-two underprepared college freshmen were used as subjects in a 2 x 2 x 2 factorial design. The instrument used was the Learning and Study Strategies Inventory (LASSI). Results indicate that neither approach made any significant difference in the students' attitudes, motivation, or time management skills. Some negative gain scores on the posttests indicate a drop in attitude and motivation upon completion of the course. Further analysis indicates that the SALT is effective for teaching young females and older males how to use study skills. Ten tables present study data. (SLD)

EFFECTIVENESS OF SUGGESTIVE-ACCELERATIVE LEARNING TECHNIQUES IN TEACHING UNDERPREPARED COLLEGE FRESHMEN

Vera A. Confer-Owens

Nashville State Technical Institute

A Paper Presented at

Mid-South Educational Research Association

November 13, 1992

Knoxville, Tennessee

The College Board (1983) has identified six basic academic disciplines necessary to function in college: English, the arts, mathematics, science, social studies and foreign languages. Many first year college students are not academically prepared for college entry level classes lacking in some or all the six basic academic disciplines. These students are referred to in the literature as underprepared and may be of non-traditional age or traditional age. A non-traditional student is usually defined as a student older than 20 who is returning to college,in contrast to a traditional student who is defined as being a white male 18-20 years of age. Being underprepared is not an indicator of a student's intellectual abilities but rather his/her," . . . inadequate or inappropriate environmental and educational experiences" (Evans & Dubois, 1972, p. 39). Underprepared students, in addition to being weak in the academic disciplines also have weaknesses in study skill strategies (J.Roueche & S. Roueche, 1977). Study skill competencies are skills such as time management, memory techniques, reading a text for meaning, motivation and academic goal setting. Students need to use these techniques in conjunction with good study habits to correct their weak academic competencies (e.g., math, reading, English).

The purpose of this study was to determine the efficacy of two methods to teach study skills to underprepared college freshmen at a two-year technical institute. This study examined the effectiveness of using a traditional method in comparison to using the Suggestive-Accelerative Learning Techniques (SALT). SALT is a holistic method that attempts to engage both sides of the brain by creating a positive learning environment through the use of music and relaxation.

METHOD

A 2 x 2 x 2 factorial design was used. The factors were treatment (experimental vs. control), gender (female vs. male), and age (young vs. old). Ninety-two underprepared college freshmen were used as subjects. Subjects were students who were required to enroll in a developmental study skills class. The instrument used in the study was the Learning and Study Strategies Inventory (LASSI). In order to determine if there were significant differences between independent variables an ANOVA test of significance was used to determine whether to reject or accept the null hypotheses.

RESULTS

The following hypotheses were accepted at the .05 level:

Hypothesis 1. There will be no significant difference between the experimental group and the control group scores on the dependent variables of attitude, motivation, time management, anxiety, concentration, information processing, selecting main ideas, study aids, self testing, and test strategies.

Hypothesis 2. There will be no significant difference between male and female scores on the dependent variables of attitude, motivation, time management, anxiety, concentration, information processing, selecting main ideas, study aids, self testing, and test strategies.

Hypothesis 3. There will be no significant difference between older and younger students' scores on the dependent variables of attitude, motivation, time management, anxiety, concentration, information processing, selecting main ideas, study aids, self testing, and test strategies.

DISCUSSION

The results of this study seem to indicate that neither the traditional method nor SALT made any significant difference in the students' attitude, motivation or time management skills. In fact the mean gain scores on the attitude and motivation scales, albeit not at a significant level, consisted of some large negative mean gain scores and some very small positive gain scores. This would indicate larger pretest scores than posttest scores on the negative mean gain scores. The implications are that students, upon completion of the course, had a drop in attitude and motivation. One possible explanation for this drop is that the posttest was given at the end of the semester when students were, indeed, less motivated and had poor attitudes from a long semester. Another possible explanation is that students were not volunteers; according to Entwisle (1960) volunteers seem to do better. Some students had a poor attitude toward being required to take study skills. This attitude was readily apparent by some of the remarks made by some control subjects to the researcher. Students' stated,"I don't understand why I have to take study skills in the first place; I don't need it." This sort of attitude seemed prevalent in the control group and is reflected in the final grades. Attitude influences a person's motivation in completing tasks. The poor attitude and lack of motivation possibly could have had an impact on the time management mean gain scores. These mean gain scores were not signigicant at .05 alpha level and were very nominal and, in some cases, negative. The implication is that time management skills for students went down, rather than up, upon completion of the course with no significant difference between methodology (traditional, SALT). Another possible explanation for the low mean gain scores can be found in some of the remarks made by students in the control

Table 1

Source Table for Analysis of Variance for the Attitude Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	.24	1	.24	.01	.930
Gender	9.64	1	9.64	.31	.581
Age	46.98	1	46.98	1.50	.224
2-Way Interactions					
Group x Gender	8.45	1	8.45	.27	.605
Group x Age	9.26	1	9.26	.30	.588
Gender x Age	107.02	1	107.02	3.41	.068
3-Way Interaction					
Group x Gender x Age	1.34	1.	1.34	.04	.837

Note. p<.05.

Table 2

Source Table for Analysis of Variance for the Motivation Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	10.80	1	10.80	.33	.568
Gender	3	1	3	.09	.764
Age	56.50	1	56.50	1.72	.194
2-Way Interactions					
Group x Gender	48.00	1	48.00	1.50	.230
Group x Age	.106	1	.106	.00	.955
Gender x Age	9.62	1	9.62	.29	.590
3-Way Interaction					
Group x Gender x Age	9.91	1	9.91	.301	.584

Note. p<.05.

Table 3

Source Table for Analysis of Variance for the Time Management Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	2.85	1	2.85	.09	.760
Gender	1.16	1	1.16	.04	.845
Age	.41	1	.41	.01	.907
2-Way Interactions					
Group x Gender	5.13	1	5.13	.17	.681
Group x Age	14.75	1	14.75	.49	.486
Gender x Age	73.54	1	73.54	2.44	.122
3-Way Interaction					
Group x Gender x Age	13.89.	1	13.89	.46	.500

Note. p<.05.

Table 4

Source Table for Analysis of Variance for the Anxiety Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	.29	1	.29	.01	.928
Gender	52.74	1	52.74	1.51	.222
Age	57.52	1	57.52	1.65	.202
2-Way Interactions					
Group x Gender	.25	1	.25	.01	.933
Group x Age	4.08	1	4.08	.11	.733
Gender x Age	1.56	1	1.56	.045	.833
3-Way Interaction					
Group x Gender x Age	8.72	1	8.72	.25	.618

Note. p<.05.

Table 5

Source Table for Analysis of Variance for the Concentration Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	31.95	1	31.95	1.08	.302
Gender	20.08	1	20.08	.68	.412
Age	7.30	1	7.30	.25	.621
2-Way Interactions					
Group x Gender	4.97	1	4.97	.17	.683
Group x Age	.16	1	.16	.01	.942
Gender x Age	1.70	1	1.70	.06	.812
3-Way Interaction					
Group x Gender x Age	5.34	1	5.34	.18	.671

Note. $p<.05$.

Table 6

Source Table for Analysis of Variance for the Information Processing Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	3.74	1	3.74	.14	.713
Gender	5.88	1	5.88	.21	.645
Age	.02	1	.02	.00	.981
2-Way Interactions					
Group x Gender	56.87	1	56.87	2.07	.154
Group x Age	.06	1	.06	.00	.964
Gender x Age	4.24	1	4.24	.15	.656
3-Way Interaction					
Group x Gender x Age	.044	1	.044	.00	.968

Note. $p<.05$.

Table 7

Source Table for Analysis of Variance for the Selecting Main Idea Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	.00	1	.00	.00	.988
Gender	.09	1	.09	.01	.938
Age	9.90	1	.016	9.90	.413
2-Way Interactions					
Group x Gender	30.16	1	30.16	2.06	.155
Group x Age	11.17	1	11.17	.765	.384
Gender x Age	120.29	1	120.29	8.23	.005
3-Way Interaction					
Group x Gender x Age	.109	1	.109	.007	.931

Note. $p<.05$.

Table 8

Source Table for Analysis of Variance for the Study Aids Scale's Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	.47	1	.47	.015	.902
Gender	1.68	1	1.68	.06	.814
Age	16.59	1	16.59	.547	.462
2-Way Interactions					
Group x Gender	1.34	1	1.34	.04	.834
Group x Age	1.88	1	1.88	.062	.804
Gender x Age	39.59	1	39.59	1.30	.257
3-Way Interaction					
Group x Gender x Age	209.19	1	209.19	6.90	.010

Note. $p<.05$.

Table 9

Source Table for Analysis of Variance for the Self Testing Scale Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	5.33	1	5.33	.163	.688
Gender	.337	1	.337	.01	.919
Age	31.00	1	31.00	.947	.333
2-Way Interactions					
Group x Gender	15.38	1	15.38	.470	.495
Group x Age	2.95	1	2.95	.090	.765
Gender x Age	.31	1	.31	.01	.923
3-Way Interaction					
Group x Gender x Age	27.02	1	27.02	.83	.366

Note. p <.05.

Table 10

Source Table for Analysis of Variance for the Selecting Test Strategies Scale Gain Score

Source	SS	df	MS	F	p
Groups Experimental v Control	.684	1	.684	.02	.879
Gender	2.78	1	2.78	.09	.759
Age	13.83	1	13.83	.47	.495
2-Way Interactions					
Group x Gender	.74	1	.74	.03	.874
Group x Age	18.10	1	18.10	.62	.435
Gender x Age	103.16	1	103.16	3.51	.064
3-Way Interaction					
Group x Gender x Age	12.75	1	12.75	.43	.512

Note. p<.05.

group to the researcher. Several students indicated they had two jobs while carrying a full time student load of 12 hours. Additional students indicated having full time jobs while also being a full time student. This could possibly explain some of the low time management mean gain scores.

Neither the SALT method nor the traditional method made any significant gains; however, there were some noteworthy mean gain scores on the anxiety scale. The experimental group did have a larger mean gain score on the anxiety scale, but it was not significant at the alpha level of .05. Older students had the highest mean gain score on the anxiety scale. The next highest mean gain score was for older females in the experimental group.

The other scales, concentration, and information processing, had marginal to nominal positive mean gain scores to some very small negative mean gain scores. Again nothing was significant at the .05 alpha level.

There was an interaction effect on the scale of selecting main ideas; older females had more of a significant gain than younger females. This indicates that older females had higher posttest scores than younger females. In this condition, the interaction effect does not distinguish between control and experimental groups. A possible explanation for this effect is an uncontrolled extraneous variable. In this particular case, it could be that some of the students with higher mean gain scores were enrolled concurrently in a reading class while in the developmental study skills class, thus increasing the mean gain scores on selecting the main idea.

A significant interaction effect at .05 alpha level was found on the study aids scale.

On this scale experimental young females had a positive gain score. Experimental young males almost had a complete diametrically opposite gain score from that of the young experimental females. In the same diametrical vein were the mean gain scores for the experimental older females who had a low mean gain score in comparison to the control older males with the higher mean gain score. The findings would seem to indicate that SALT was effective for teaching young females and older males how to use study aids.

The other scales, self-testing and testing strategies, had marginal to nominal positive mean gain scores to some very small negative mean gain scores. Again nothing was significant at the .05 alpha level.

In conclusion, the findings from the study would seem to indicate that females, upon completion of the course experienced less anxiety than males, but not at a significant alpha level of .05. One concern that arises from this condition is that females may have had higher anxiety level to begin with than males. This would explain the higher mean gain scores. The literature and the findings from this study would seem to indicate that further research should be explored regarding the anxiety levels of underprepared males and females.

The significant interaction effect of study aids upon young experimental females and older experimental males would suggest that SALT was effective when used to teach study aids. Further research might reveal if the methods of SALT (relaxation and imagery) could be taught to be used as an additional autonomous study aid. Neither the traditional method of teaching nor the SALT method was found to be significant in teaching study skills. However, the experimental group had more A and B grades and fewer C and F grades than the control group. This could be due to the SALT method or caused by some unknown

extraneous variables. A suggestion for a future study would be to replicate the study but to make it a longitudinal study to examine the differences between groups on grades and to determine which group completed their academic pursuits.

Bibliography

Academic preparation for college. What students need to know and be able to do. (1983). New York: The College Board.

Entwisle, D. R. (1960). Evaluations of study-skills courses: A review. Journal of Educational Research, 53, 243-251.

Evans, H. M., & Dubois, E. E. (1972). Community/junior college remedial programs--reflections. Journal of Reading, 16, 38-45.

Lozanov, G. (1978). Suggestology and outlines of suggestopedy. (M. Hall-Pozharlieva & K. Pashmakova, Trans.) New York: Gordon and Breach (Original work published 1971).

Maxwell, M. (1979). Improving student learning skills. San Francisco: Jossey-Bass.

National Center for Education Statistics. (1989). Digest of education statistics 1989 (25th ed) (United States Department of Education). Washington, DC: U.S. Government Printing Office.

Roueche, J. E., & Roueche, S. D. Roueche. (1977) Developmental Education a Primer for Program Development and Evaluation. Atlanta: Southern Regional Education Board.

Schuster, D. H., & Gritton, C. E. (1986). Suggestive accelerative learning techniques. New York: Gordon and Breach.

Weinstein, C. E. (1987). LASSI user's manual. Clearwater: H & H Publishing Co.