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ABSTRACT

Recently the call for a "balanced" approach to the basic course in speech communication has caught the imagination of numerous directors and teachers of fundamentals courses. This paper examines the assumption that a "balanced" course in speech communication can provide significant improvement in the following respects: (1) the ability to see logical, abstract relations; (2) tendency to view a communicated message separately from the source sending it; (3) levels of anxiety when communicating; (4) assessment of their own communicative abilities; and (5) inclination to participate in communicative acts. None of the assumed improvements occurred. Results of the study are discussed in light of the experimental design used, since a less rigorous design, one often found in studies finding significant positive effects of the basic speech communication course, did produce significant differences in two hypotheses. (Author)

THE EFFECT OF THE BASIC SPEECH COURSE ON ANXIETY, DOGMATISM, COGNITIVE ABILITY, AND COMMUNICATIVE ABILITY

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Recently the call for a "balanced" approach to the basic course in speech communication has caught the imagination of numerous directors and teachers of fundamentals courses. This paper examins the assumption that a "balanced" course in speech communication can provide significant improvement in the following respects:

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5) Inclination to participate in communicative acts.

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THE EFFECT OF THE BASIC SPEECH COURSE ON ANXIETY, DOGMATISM, COGNITIVE ABILITY, AND COMMUNICATIVE ABILITY

by

Steve A. Taylor and Peter K. Hamilton

The basic course is the foundation of any department of speech communication; it is the most obvious point of exposure for the department to large numbers of students.

Recently the concern for measuring the success of the basic course has produced a plethora of research exploring course strategies and their effects. Much of the research reflects a public speaking orientation dealing primarily with the students' speaking effectiveness.[1] However, the desire to further determine the components of speaking effectiveness, and the contemporary concern for interpersonal communication effectiveness, have led to experimental assessment of other dependent variables.

Specifically the effect of the basic course upon students' anxiety toward communication has been explored. Sikkink (1955) reported significant ($p < .01$)

[1] For a sampling of research pertaining to this dependent variable, see: Borchers, Gladys, "Direct vs. Indirect Methods of Instruction of Speech." Journal of Educational Research, 29 (March 1936), 512-517; Hayworth, Donald, "A Search for Facts on the Teaching of Public Speaking, II," Quarterly Journal of Speech, 16 (February 1940), 31-36; Ewing, William Hollis, "An Evaluation of the Individual Versus the Group Speaking Method of Teaching the Beginning College Speech Course," Speech Monographs, 11 (1944), 80-87; Sikkink, Donald E., "An Experimental Study Comparing Improvers and Non-Improvers in the Beginning Speech Course," Western Speech, 19 (May 1955) 201-205; Becker, Samuel L., and Dallinger, Carl A., "The Effect of Instructional Methods upon Achievement and Attitudes in Communication Skills," Speech Monographs, 27 (March 1960), 70-76; Eakins, Rollin Gene, "A Comparative Study of the Effectiveness of Teaching the Service Course in Speech as a Content and as a Performance Course," Diss. Ohio State University, PhD, 1966; and, Faules, Don F., Littlejohn, Steve and Ayres, Joe, "An Experimental Study of the Comparative Effects of Three Instructional Methods on Speaking Effectiveness," Speech Teacher, 21 (January 1972), 46-52.

improvement in anxiety scores following ten weeks of a basic speech course. Furbray, Hedges, and Markham (1966) compared the results of two approaches to basic speech on anxiety; they reported significant ($p.<001$) lowering of anxiety feelings in a class which emphasized listening when compared to a class with a traditional public speaking orientation. More recently, Ness (1968) measured anxiety scores before and after one semester of speech and found significant ($p.<.01$) improvement.

A second variable tested has been the student's ability to examine issues logically and rationally, commonly labeled critical thinking ability, or simply cognitive ability. Ewing (1944) had early reported significant ($p.<.05$) improvement in thinking ability after students had taken a speech class. Similarly, Frank (1969) examined pretest and posttest scores of students in two types of speech classes, a regular fundamentals class, and a class taught with special emphasis on critical thinking. He noted that the improvement in the class as normally taught was not significant over the period of one semester or after one year (delayed posttest). Although the class which placed special emphasis on thinking did record significant ($p.<.005$) improvement, the author concluded by noting that his finding "questions the assumption that speech-as-normally-taught. . . improves critical-thinking ability" (p. 302). Ness (1968) compared critical-thinking improvement in three classes; speech, political science, and logic. He reported significantly ($p.<.01$) more improvement in logic classes than in either of the other two, and he further noted that the political science and speech classes had made roughly equivalent gains over the period of the semester.

The effect of the basic course upon the student's personal assessment of his own communicative ability has been explored only indirectly, with inconsistent results. Ewing (1944) reported significant ($p.<.05$) improvement in attitude toward speech upon completion of the basic speech course. Similar results were reported by Becker and Dallinger (1960). However, Schuelke (1972) asserted that the basic speech course had no effect on attitudes toward communication. To date, no research has been reported which compares a speech class with a control class on the variable of personal assessment of ability to communicate.

In addition, despite the fact that many fundamentals courses attempt to teach the student to evaluate the "message" received independent of the "source," no experimental assessment of the course effect in this regard was found.

Two major weaknesses of the research reviewed to this point should be considered. First, the majority of those mentioned (Ewing, 1944; Sikkink, 1955; Becker and Dallinger, 1960; Frank, 1969; and, Furbray, Hedges, and Markham, 1966) did not utilize a non-speech class control group in their design. This may effect the internal validity of the design and limit the generalizability of the results (Campbell and Stanley, 1963, pp. 5-12.) The contaminating influence of extraneous factors such as maturation, history, etc. was not controlled in these experiments.

Second, the independent variables largely fit one of two categories. First, some studies dealt with variations of the basic course which were designed and carried out just for the experiment; the effects of an ongoing course were not examined by these writers. For example, Frank (1969) assessed the effect upon critical-thinking ability of a special course which placed disproportionate stress upon critical-thinking training. Second, although many departments have offered a "balanced" approach to the basic course, most experimental evaluations enforce a false dichotomous setting, i.e., the effects of the totally public speaking course versus the effects of the fall-communication-theory-with-no-performance course. No study has focused upon the effects of a basic speech course which preserves public speaking exercises along with intrapersonal and interpersonal communication theory and experiences as an integral part of the course.

Because of these methodological and design weaknesses the multiple effects of a "balanced" fundamentals of speech communication course remain unknown. This report concerns research testing the effectiveness of the basic course expressed in the following hypotheses.

H_1: Subjects completing a balanced course in speech communication will significantly reduce their anxiety toward various communication settings.

H_2: Subjects completing a balanced course in speech communication will significantly improve in their ability to evaluate information independent of source.

H_3: Subjects completing a balanced course in speech communication will significantly improve in their ability to see abstract relationships.

H_4: Subjects completing a balanced course in speech communication will significantly improve their assessment of their ability to communicate in a wide variety of settings.

METHOD

Six sections of Speech 207 at Kansas State College of Pittsburg served as the experimental group during the spring semester of 1973. One section of English 102 was chosen at random to serve as a control group. Both groups were populated largely by freshmen and sophomores; the speech sections were taught by graduate assistants under the supervision of two senior instructors. Absences and errors in taking the tests reduced the respective N sizes to: Experimental, N-86; Control, N-16.

Independent Variables. Two variations of the basic speech course, under the direction of the two senior instructors were the independent variables. They are briefly summarized as follows:

Senior Instructor One: This version of Speech 207 is presented in three major subdivisions: intrapersonal communication, interpersonal communication, and public communication. Each subdivision receives approximately equal attention during the course of the semester. The portion of the course dealing with intrapersonal communication concentrates on the perception, processing, and transmitting of information in communication. The interpersonal communication unit deals with small-group processes, feedback, and problem-solving. The public communication portion of the course centers around two assignments, a panel debate and a final oral project of the student's choosing. The assignments in the course include lecture, films, gemes demonstrating principles, graded oral assignments, and written examinations.

Senior Instructor Two: This version of Speech 207 is organized around major assignments as follows. Two types of written assignments are utilized: the students write two papers criticizing the audience adaptation of out-of-class public

speakers; and, the students take midterm and final examinations. The oral assignments are: dyadic presentations which introduce the class members, a speech based upon personal experience, a speech emphasizing testimony, public panel discussions, impromptu speeches or job interviews, some exercise in parliamentary procedure, and, a final speech to persuade. In addition, class discussion of the speech topics dealt with usually follows each assignment.

Dependent Variables. Four dependent variables were measured by this study: (1) anxiety, (2) dogmatism, (3) cognitive ability, and (4) personal assessment of communicative ability.

Anxiety was measured by the subject's response to the Personal Report of Communication Anxeity Scale, PRCA (McCroskey, 1970). The difference between the subject's score on the pretest and his score on the posttest was considered the change in the level of anxiety experienced when approaching communicative acts.

Dogmatism was measured by the subject's performance on the Rokeach Dogmatism Scale, Short Form (Troldahl and Powell, 1965). The difference between the subject's score on the pretest and his score on the posttest was considered the change in his inclination to view information open-mindedly, separating source and content.

Cognitive ability was measured by the subject's performance on the card rotation test (Thurstone, 1962). The difference between the subject's score on the pretest and his score on the posttest was considered his change in cognitive ability.

Personal assessment of communicative ability was measured by the subject's performance on Bienvenu's Interpersonal Communication Inventory (Bienvenu, 1971). The difference between the subject's score on the pretest and his score on the posttest was considered his changed assessment of his communicative skills.

Small Manipulation

Assumption Checks. Prior to data analysis, the independence of the dependent variables was tested. It was assumed that each dependent variable was measuring

a different phenomenon. In order to check this assumption, Pearson r correlations were performed ($p. < .05$, two-tailed, H_o: $r=0.00$) on all combinations of dependent variables. The tests revealed no significant correlations between the dependent variables.

Checks on randomization were also performed. It was assumed that the students' pretest scores would be randomly distributed across senior instructor grouping, graduate assistant grouping, or time of class meeting grouping. To check these assumptions, analyses of variance were performed on the pretest scores of each group. None of the resulting F ratios approached significance.

Test of research hypotheses: To test the research hypotheses, pretest-posttest gain scores for both experimental and control groups were determined, and two sample one-way analyses of variance were computed between experimental and control groups on these gain scores (Campbell and Stanley, 1963, p. 23).

Post Hoc Analysis. If the date analyses suggested no significant differences, then a series of post hoc comparisons were to be performed. To assess the influence of the gain-score comparison with control group design, a series of two sample one-way analyses of variance were performed comparing pretest and posttest scores of the experimental and control groups.

RESULTS

H_1: Students in basic speech will show significantly more reduction in anxiety toward various communicative settings than the control group.

In order to test this hypothesis, a one way analysis of variance was performed comparing the pretest-posttest gain scores of the two experimental sections and the control group. A summary of the test is shown in Table I. The resultant F ratio was not significant ($p. < .05$). On the basis of this test, the null hypothesis could not be rejected.

H_2: Students in basic speech will show significantly more improvement in the ability to evaluate information independent of source than the control group.

In order to test this hypothesis, a one way analysis of variance was performed comparing the pretest-posttest gain scores of the two experimental sections and

the control group. A summary of the test is shown in Table II. The resultant F ratio was not significant ($p. < .05$). On the basis of this test, the null hypothesis could not be rejected.

H_3: Students in basic speech will show significantly more improvement in cognitive ability than the control group.

In order to test this hypothesis, a one way analysis of variance was performed comparing the pretest-posttest gain scores of the two experimental sections and the control group. A summary of the test is shown in Table III. The resultant F ratio was not significant ($p. < .05$). On the basis of this test, the null hypothesis could not be rejected.

H_4: Students in basic speech will show significantly more improvement in their assessment of their communicative skills.

In order to test this hypothesis, a one way analysis of variance was performed comparing the pretest-posttest gain scores of the two experimental sections and the control group. A summary of the test is shown in Table IV. The resultant F ratio was not significant ($p. < .05$). On the basis of this test, the null hypothesis could not be rejected.

Post Hcc Analyses. Since the major hypotheses testing revealed no significant differences, a series of post hoc analyses were performed. These analyses were designed to assess the impact upon the results obtained of the gain-score comparison within a control group design. The analyses proposed to determine whether significant results could be obtained by calculating two sample one way analyses of variance comparing pretest and posttest scores in each senior instructor group and the control group on each of the four dependent variables. The results may be summarized as follows: The control group showed no significant ($p. < .05$) improvement on any of the four dependent variables; senior instructor two showed significant ($p. < .01$) improvement in cognitive ability and significant ($p. < .05$) improvement in anxeity; senior instructor one showed significant ($p. < .001$) improvement in cognitive ability and significant ($p. < .05$) improvement in anxeity; but, no significant differences were found on the other dependent variables.

DISCUSSION

As the preceding section indicated, this study did not find support for the major research hypotheses. Before accepting these findings, a brief examination of

internal and external validity qualification should be made.

Internal validity. At least two developments may have affected the internal validity of the study. First, both the graduate students who conducted the in-class testing and a visual examination of the test booklets strongly suggested that some subjects were less than candid in their responses. Some subjects refused to answer given sections of the test, others answered all questions with identical responses, still others checked the answer blanks so as to form geometric patterns. The tests which were accordingly suspect were dismissed from the study. In that screening process, some valid tests may have been mistakenly thrown out; on the other hand, inaccurate tests may have been retained by oversight or mistaken interpretation. The ultimate outcome may have been appreciably altered by the interplay of these factors.

Second, the control group chosen for use in the study may not have isolated the influence of the independent variables to the extent desired. The control group, an English composition class, approximated the experimental sections in the essential respects, i.e., age, education level, background, previous speech experience, etc. However, since the students in the control group were being taught to communicate verbally, there was overlap with the experimental treatment. It might be argued that an English composition class should improve significantly on the dependent variables, cognitive ability and personal assessment of communication ability. If such an influence was at work, then the outcome of the study was appreciably affected.

External validity. The generalizability of these results is somewhat limited by two factors. First, the subjects were almost exclusively freshmen and sophomores in a small state college (approximately 5,000 total enrollment). The background which a majority of the subjects brought to the study was smalltown or rural. Second, the geographical area served by Kansas State College of Pittsburg is one which sees active student involvement in high school speech activities, curricular and extracurricular. Many of the students involved in the experiment had previous speech training; some had participated in contest work. The history effects of age, education level, geographical characteristics, and previous speech experience

may have interacted with experimental treatment to produce unique results.

Implications for the basic speech course. Given the limitations on the validity of the results, the outcome of the experiment offers some valuable implications for the basic speech course.

First, despite the fact that significant improvement does occur during the course of the semester, as indicated by the post hoc analyses, the basic speech course alone does not appear to have the effect predicted. However, post hoc results, derived from pre- and posttest scores only, suggest that the basic course interacts with other factors (e.g., history, subject maturation, etc.) to produce significant student improvement during the semester.

Second, despite the absence of predicted outcomes, the study lends support to the importance of rigorous experimental design. It raises some question about results reported in the review of literature which utilized pretest versus posttest scores analyzed with a t test, neglecting the use of a non-speech class control group. Perhaps some of the conclusions dictated by that research should be re-examined.

Suggestions for Further Study. Despite the fact that this study does offer some specific results concerning the effect of the basic speech course, a number of related questions remain to be answered. This report concludes with two specific suggestions for future investigation. First, stratification of subjects may help to determine the effects of the basic course upon various types of students. For example, how does the highly anxious student change during the semester on the dependent variables used in this study and others? Do highly intelligent students improve on these measures significantly more than others? Do students who bring a low level of dogmatism to the course tend to perform better during the semester?

Second, the possible variations within the independent variable used in this study are substantial. It would undoubtedly prove helpful to determine if the basic course would have greater impact on student achievement if other types of assignments than those used in this study were utilized, if assignments were repeated, if less emphasis was placed on graded assignments, if behavioral or instructional objectives were used in the course, etc. The answers to these questions should prove helpful to those choosing assingments or instructional options.

Table I

Anxiety: Summary of One Way Analysis of Variance: Gain Scores

Source	d.f.	S.S.	M.S.	F.
Between	2	179.6185	89.8092	1.0785
Within	99	8243.8423	83.2711	
Total	101	8423.4608		

Table II

Dogmatism: Summary of One Way Analysis of Variance: Gain Scores

Source	d.f.	S.S.	M.S.	F.
Between	2	27.2909	13.6454	0.1425
Within	99	9473.3856	95.6907	
Total	101	9500.6765		

Table III

Cognitive Ability: Summary of One Way Analysis of Variance: Gain Scores

Source	d.f.	S.S.	M.S.	F.
Between	2	3726.8029	1863.4014	2.3619
Within	99	78104.1089	788.9303	
Total	101	81830.9118		

Table IV

Communicative Ability: Summary of One Way Analysis of Variance: Gain Scores

Source	d.f.	S.S.	M.S.	F.
Between	2	54.6685	27.3342	0.8759
Within	99	3089.2923	31.2049	
Total	101	3143.9608		

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