Basic Communication Course Annual

Volume 11 Article 9

1999

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The debilitating effects of communication apprehension (CA) have been well established in the communication literature and consequently, basic communication course instructors have long been concerned with helping students manage apprehension and escape the negative consequences. By investigating the factors that influence CA, researchers have been able to suggest teaching strategies and interventions to help students manage communication anxiety. Two of these factors that have received considerable investigation include grades and self-esteem. Recently, communication research has suggested that self-efficacy (S-E), one particular dimension of self-esteem, is more closely related to CA than self-worth and therefore, the CA/S-E relationship should receive further investigation because of the implications it would have on instructional interventions (Colby, Hopf, & Ayres, 1993; Hopf & Colby, 1992).

The purpose of this study was to investigate the relationship between CA and S-E in a basic public speaking course. In addition, since some studies have shown that high CAs are at a grade disadvantage in a traditional public speaking course, this investigation sought to determine if CA or S-E are predictive of grade.

LITERATURE REVIEW

Communication Apprehension and Self-efficacy

Communication Apprehension. Several personality variables have been associated with CA. Positive correlates with CA include loneliness, public self-consciousness, touch avoidance, situational anxiety, writing apprehension, alienation, and fear of negative evaluation (Andersen & Leibowitz, 1976; Bell & Daly, 1983a; Burgoon, 1976; Cheek & Buss, 1981; Daly & Stafford, 1984; Daly, Caughlin, & Stafford (in press): Jones & Russell, 1982). Negative correlates with CA include level of individualization, tendency to self-disclose, self-monitoring, innovativeness, argumentativeness, assertiveness, social responsiveness, self-control, adventurousness, dominance, nurturance, affiliation, attentiveness, and socialization (Bell & Daly, 1983b; Briggs, Cheek, & Buss, 1980; Hunt & Joseph, 1975; Infante & Rancer, 1982; McCroskey, Daly, & Sorensen, 1976; Miller, Berg, & Archer, 1983; Richmond, 1980; Rosenfeld & Plax, 1976).

Numerous studies have found negative correlations between CA and self-esteem (Cheek & Buss, 1981; Comrey, 1973; Jones & Russell, 1982; Leary, 1983; Lustig, 1974; McCroskey & Richmond, 1975; McCroskey, Richmond, Daly & Falcione, 1977). Specific dimensions of self-esteem, studied in relationship to CA, include intelligence and self-sufficiency (McCroskey & Sorensen, 1976). Although self-sufficiency and intelligence have not been associated with CA, educational achievement on ACT tests, college grade-point averages, and grades in a course where communication is required have been associated with CA (Allen, 1984; Bourhis & Allen, 1992; Hurt, Priess & Davis, 1976; McCroskey & Andersen,

1976; McCroskey & Daly, 1976; McCroskey & Leppard, 1975; Powers & Smythe, 1980; Richmond, 1984; Richmond, 1997). A few recent studies have examined self-efficacy (S-E), another important dimension of self-esteem, and its inverse relationship with CA in interpersonal interactions (Colby, Hopf, and Ayres, 1993; Hopf & Colby, 1992). However, few studies, if any, have queried the relationship between CA and the S-E dimension of self-esteem in the context of a beginning public speaking course.

Self-Efficacy. S-E has been defined as the belief in one's ability to "organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). It involves a conviction about being able to use skills, and thus, influences an individual's cognitions, self-esteem, goal selection, and effort expended toward goal attainment (Bandura, 1977).

The theory of S-E has been examined extensively in educational settings and has been found to influence learning, motivation, and achievement. A wide range of studies have shown significant and positive associations between S-E for learning (assessed prior to instruction) and subsequent task motivation (range of r=.38 to .42; Schunk & Hanson, 1985; Schunk, Hanson, & Cox, 1987), and between S-E for learning judgments and posttest S-E and skill acquisition (range of r=.46 to .90; Schunk, 1989). In general, when compared with students who doubt their learning skills, students with high S-E for accomplishing a task or attaining a performance "participate more readily, work harder, and persist longer when they encounter difficulties" (Schunk, 1995, p. 282).

A meta-analysis of various research studies involving the relationship between S-E and academic outcomes reported that S-E beliefs are predictors of performance and persistence across numerous situations

(Multon, Brown, and Lent, 1991). In higher education, several studies have revealed that S-E is a predictor or has an influence on the academic achievement (i.e., higher grades) and the persistence of college students (Brown, Lent, & Larkin, 1989; Hackett, Betz, Casas, & Rocha-Sing, 1992; Lent, Brown, & Larkin, 1987; Lent, Lopez, & Bieschke, 1993; Lent, Brown, & Larkin, 1984; Lent, Brown, & Larkin, 1986). However, most of these studies involved respondents who were students with declared engineering majors or situations where outcomes in math or science courses were queried. The influence of S-E in a beginning public speaking course has received little, if any, investigation.

Communication Apprehension and Self-efficacy. Hopf and Colby (1992) found that interpersonal CA "was more closely related to feelings about one's abilities to accomplish goals (S-E) than it is to feelings of self-worth" (p. 133). They called for further study into the relationship between S-E and the other CA contexts (e.g., public speaking). Colby, Hopf, and Ayres (1993) indicated that S-E in interpersonal relationships "was more closely related to CA than self-worth" and in fact "self-worth was not even significantly related to CA" (p. 226). They, too, called for further research involving the CA and S-E relationship because instructional interventions for CA that help increase high CAs' feelings of personal efficacy could contribute most effectively and efficiently to anxiety reduction.

Based upon the results of the CA-self-esteem studies, the CA-S-E studies, and the CA-grades studies, the following two hypotheses were formulated:

H1 There is a negative relationship between trait CA and S-E.

H2 There is a negative relationship between the contexts of CA and S-E.

Academic Success, Communication Apprehension, and Self-efficacy

Several communication studies have pointed out that high CAs suffer academically with lower grades and lower evaluations (Allen, 1984; Hurt & Preiss, 1978; McCroskey, 1977; Powers & Smythe, 1980; Richmond & McCroskey, 1995). For example, McCroskey, Booth-Butterfield, and Payne (1989) reported high CAs achieved lower GPAs and were more likely to drop out of school than moderate or low CAs. Rubin, Graham, and Mignerey (1990) confirmed that high CAs were likely to drop out of college or else they become less apprehensive during their four years in college. Ericson and Gardner (1992) also reported that high CAs were more likely to drop out of college, but they did not find that high CAs had lower GPAs. Using a meta-analysis of 23 empirical studies, Bourhis and Allen (1992) found a significant inverse relationship between CA and cognitive performance ($r = -.12$).

The relationship between S-E and academic achievement has been well established. Lent, Brown, and Larkin (1984) reported that S-E "contributed significant unique variance to the prediction of grades" (p. 165). Ferrari and Parker (1992) found that individuals with high S-E performed well in college and that S-E served as a predictor of academic performance. These same conclusions were supported by other studies using subjects in fields ranging from psychology to computer science (Mitchell, Hopper, Daniels, George-Falvy, & James, 1994; Wilhite, 1990).

Many of the studies that examined the effects of CA on academic achievement did not also examine S-E. Since S-E has been related to CA, this variable could have as much effect on grade as CA has been shown to

have on grade. Consequently the following hypotheses were formulated:

H3 There is a negative relationship between CA and final grade in a public speaking course.

H4 There is a positive relationship between S-E and final grade in a public speaking course.

H5 CA and S-E predict final grade.

Communication Apprehension and Demographics

A meta-analysis of twenty-three empirical studies reveals correlations between CA and GPA and between CA and student age (Boorhis & Allen, 1992). However, recent studies reveal no relationship between CA and GPA (Ericson & Gardner, 1992). Consequently, one additional demographic hypothesis was posed:

H6 There is a relationship between demographics (age, sex, grade-point average (GPA), or year in college) and CA.

METHODOLOGY

Respondents

Respondents for this study were 208 undergraduate students (104 females, 104 males) enrolled in 16 randomly-selected sections of a beginning public speaking course. Originally, 255 students agreed to participate in the study, but 47 of these students dropped out of the course. Their scores on the scales at Time 1 did not differ significantly from the remaining 208. Respondents represented a cross-section of class rankings (118

freshmen, 52 sophomores, 28 juniors, 8 seniors, 2 graduate) and disciplines because the course fulfills a university-wide general education requirement for public speaking. The age of the students ranged from 17 to 47 with a mean of 22 and a median of 20.

Questionnaires were administered during regular class time in the first week of the 1996 spring semester (Time 1), at the mid-point in the semester (Time 2), and in the final week of the semester (Time 3). Instructors read a script that invited students to participate in a research project, ongoing throughout the semester, that could ultimately help instructors improve instruction in the basic course. Participation was voluntary and students were assured of confidentiality and anonymity.

Measurement Instruments

Communication Apprehension. CA was measured using the Personal Report of Communication Apprehension (PRCA-24) (McCroskey, 1982). This 24-item scale assesses trait (overall) communication anxiety, as well as anxiety across four contexts (groups, meetings, interpersonal, public speaking). It uses a five-point Likert type format and has demonstrated excellent reliability and predictive validity in its wide use in CA research (McCroskey, 1978 & 1984; Richmond & McCroskey, 1995). The obtained reliability coefficients (Cronbach alphas) for the overall (trait) scale used in this study were (for Time 1, Time 2, and Time 3, respectively) .95, .94, and .95. The reliabilities for the context scales were (for Time 1, Time 2, and Time 3, respectively): groups, .90, .89, .88; meetings, .90, .89, .92; interpersonal, .88, .86, .88; and public speaking, .89, .85, .87.

Self-efficacy in Class. Self-efficacy in the beginning public speaking course was measured by the Self-Efficacy in Class scale (SECL) from Pintrich and DeGroot's (1990) "Motivated Strategies for Learning Questionnaire." The nine-question scale assesses perceived competence and confidence in performance of class work (e.g., "Compared with others in the class, I expect to do well," "I'm certain I can understand the ideas taught in the class," "Compared with others in the class, I think I know a great deal about public speaking," "I am sure that I can do an excellent job on the speeches and tasks assigned for this class"). The original questionnaire used a 7-point Likert scale, but for this study, a five-point Likert type format was used (1=strongly disagree, 2-disagree, 3=undecided, 4=agree, 5=strongly agree). Since Bandura's (1986) contentions that judgments of S-E are task specific and that S-E measures must be tailored to the task assessed have been supported by subsequent research, the verbiage was modified slightly to specifically relate to a public speaking class (e.g., "I am sure that I can do an excellent job on the problems and tasks assigned for this class" was changed to "I am sure that I can do an excellent job on the speeches and tasks assigned for this class"). Pintrich and DeGroot (1990) reported an internal reliability of .89. The obtained reliability coefficients for the SECL scale used in this study were .86 for Time 1, .87 for Time 2 and .87 for Time 3.

Self-efficacy in College. Self-efficacy in college was measured by two researcher-designed questions regarding perception of completing college work in general (i.e., "I am confident in my skills and abilities to complete college classes," "I am confident in my skills and abilities to graduate from college"). The reliabilities for the Self-Efficacy in College scale (Secol) were .87 for Time 1, .87 for Time 2, and .85 for Time 3.

Grades. Students' final grades in the course were obtained from the departmental records and the instructors who taught the classes. The records showed that 59 (28.4%) received an "A," 41 (19.7%) received a "B+," 48 (23.1%) received a "B," 21 (10.1%) received a "C+," 25 (12.0%) received a "C," 5 (2.4%) received a "D+," 4 (1.9%) received a "D," 2 (1.0%) received a "F," and 3 (1.4%) received an "Incomplete."

RESULTS

The first hypothesis, which predicted that there would be a relationship between trait CA and S-E, was tested by repeated measures analysis of variance (ANOVA) and Pearson product-moment correlations. The hypothesis was supported.

Trait CA scores can range from 24 to 120. The obtained means for the scales were (for Time 1, Time 2, and Time 3, respectively): 66.1, 62.0, 57.2 (SD, 16.7, 15.5, 17.3). The ANOVA showed that there was a significant difference in mean scores between Time 1, Time 2, and Time 3 ($F=79.24$; $p=.00$). Post hoc tests showed significant differences existed between all means at all three times.

SECL scores can range from 9 to 45. The obtained means for the scales were (for Time 1, Time 2, and Time 3, respectively): 33.6, 34.7, 35.6 (SD, 4.7, 4.9, 5.0). The ANOVA showed that there was a significant difference between mean scores. Post hoc tests showed significant differences existed between Time 1 and Time 2 and between Time 1 and Time 3.

SECOL scores can range from 2 to 10. The obtained means for the scales were (for Time 1, Time 2, and Time 3, respectively): 8.5, 8.5, 8.5 (SD, 1.3, 1.4, 1.4). The ANOVA showed that there were NO significant differ-

ences in mean scores between Time 1, Time 2, and Time 3.

Pearson product-moment correlations revealed that trait CA correlates with S-E in Class at Time 1 (r= -.57, p <.01), Time 2 (r= -.46, p <.01), and Time 3 (r= -.47, p <.01). In addition, Trait CA correlates with S-E in college at Time 1 (r= -.35, p <.01), Time 2 (r= -.29, p <.01), and Time 3 (r= -.35, p <.01).

The second hypothesis predicted a relationship between the PRCA subscales (group discussions, meetings, interpersonal conversations, public speaking) of the PRCA-24 and S-E. Again, the hypothesis was supported. Each of the PRCA subscales can range from 6 to 30. The obtained means for the scales were (for Time 1, Time 2, and Time 3, respectively): CA groups, 15.2, 13.7, 13.3 (SD, 5.0, 4.7, 4.9); CA meetings, 16.2, 15.5, 14.1 (SD, 5.0, 4.8, 5.3; CA interpersonal, 15.0, 13.9, 13.3 (4.4, 4.3, 4.6); CA public speaking, 19.6, 18.7, 16.6 (SD, 5.2, 5.0, 5.2). ANOVAs showed that there were significant differences between mean scores. Post Hoc tests revealed signifi-

Table 1
Pearson *r* Correlations between PRCA-24 CA Contexts and SECL

	SECL Time 1	SECL Time 2	SECL Time 3
Group Discussions	–.47**	–.32**	–.38**
Meetings	–.46**	–.34**	–.42**
Interpersonal Conversations	–.46**	–.39**	–.43**
Public Speaking	–.55**	–.47**	.40**
Trait CA	–.57**	–.46**	–.47**

* p < .05 ** p< .01

cant differences between Time 1, Time 2, and Time 3 for group discussions (F=29.82; p=.00); for meetings (F=39.28; p=.00); for interpersonal conversations (F=26.33; p=.00); and for public speaking (F= 62.79; p=.00). Post hoc tests showed significant differences existed between all means at all three times. Pearson product-moment correlations showed that CA in each of the four contexts correlates with S-E in Class (SECL) (see Table 1) and S-E in College (SECOL) (see Table 2).

Table 2
Pearson r Correlations Between PRCA-24 CA Contexts and SECOL

	SECOL Time 1	SECOL Time 2	SECOL Time 3
Group Discussions	–.33**	–.27**	–.31**
Meetings	–.28**	–.26**	–.28**
Interpersonal Conversations	–.32**	–.22**	–.32**
Public Speaking	–.26**	–.20**	.30**
Trait CA	–.35**	–.29**	–.35**

* p < .05 ** p< .01

The third hypothesis predicted a relationship between CA and final grade in the public speaking course. This hypothesis was not supported. The Trait CA scores and the Context CA scores were not significantly correlated with grade in the public speaking course at Time 1, Time 2, or Time 3.

The fourth hypothesis predicted a relationship between S-E and final grade in the public speaking course. This hypothesis was supported. Pearson product-mo-

ment correlations revealed that S-E in class and S-E in college correlate with final grade at all three times of data collection. The strongest correlations were found at Times 2 and 3 (see Table 3).

Table 3
Pearson *r* Correlations Between Final Grade and SECL and SECOL

	Grade (Time 1)	Grade (Time 2)	Grade (Time 3)
SECL	.14*	.35**	.50**
SECOL	.17*	.29**	.32**

* $p < .05$ ** $p < .01$

The fifth hypothesis predicted that CA and S-E would predict final grade in the public speaking course. The step-wise multiple regression equation for the trait CA, SECL, and SECOL revealed that only S-E for college at Time 1 predicted final grade, while S-E for class at Time 2 and Time 3 predicted final grade (see Tables 4 & 5). Trait CA did not enter into the equation at Time 1 and Time 2. At Time 3, trait CA accounted for only a minimal amount of the variance (see Table 6).

Table 4
Time 1: Hierarchical Regression Results

Variable	R	Rsq	F	P	Rsq ch
SECOL	.16	.03	5.48	.02	.03

Table 5
Time 2: Hierarchical Regression Results

Variable	R	Rsq	F	P	Rsq ch
SECL	.32	.10	23.03	.000	.10

Table 6
Time 3: Hierarchical RegressionResults

Variable	R	Rsq	F	P	Rsq ch
SECL	.49	.25	66.48	.000	.25
Trait CA	–.08	.28	39.09	.000	.03

The final hypothesis predicted that there would be a relationship between demographics (age, sex, GPA, or year in college) and CA. This hypothesis was not supported. Trait CA is NOT significantly correlated with age, sex, GPA, or year in college.

Additional Pearson product-moment correlations further revealed that S-E in class correlates with reported GPA at Time 1 ($r = .48$, $p < .01$), Time 2 ($r = .36$, $p < .01$), and Time 3 ($r = .27$, $p < .01$). S-E in college correlates with reported GPA at Time 1 ($r = .32$, $p < .01$), Time 2 ($r = .32$, $p < .01$), and Time 3 ($r = .32$, $p < .01$).

DISCUSSION

The findings of this study indicate that, as expected, there is a significant inverse relationship between trait CA and S-E throughout the semester in a basic public speaking course that fulfills a university-wide core cur-

riculum requirement. Students who reported higher trait CA also tended to report a lower S-E in class, as well as a lower S-E in college work in general.

The results of this study also indicate that there is a significant inverse relationship between CA contexts and S-E throughout the semester. Students who reported higher CA in the contexts of group discussions, meetings, interpersonal conversations, and public speaking also tended to report a lower S-E in class and a lower S-E in college, in general.

The results of this study found no relationship between trait CA and final grade or between context CA and final grade for students enrolled in a basic public speaking course. While these findings differed from those of a previous study that showed there was a relationship between final grade in a basic communication course and trait CA (Powers & Smythe, 1980), they supported more recent research which found that trait CA "could not predict final course grades" (Rubin, Rubin, & Jordan, 1995, p. 2). However, the present study found that trait CA reported at mid-semester (Time 2) and end of the semester (Time 3) modestly correlated with final grade in the course ($r = -.12$) which is consistent with the Boorhis and Allen (1992) meta-analysis findings.

This study also found no relationship between CA and demographic variables, including GPA. A previous meta-analysis of twenty-three empirical studies involving CA and cognitive performance has revealed that there is a small correlation ($r = -.12$) between CA and GPA (Bourhis & Allen, 1992). However, other recent studies have found no relationship between CA and GPA (Ericson & Gardner, 1992). Consequently, the present data support the finding of more recent studies.

However, the results of this investigation did find a significant positive correlation between S-E and grade

throughout the semester. The more students believed they had the ability necessary to achieve the goals and tasks of the public speaking class, the more they tended to earn a higher final grade. In fact S-E at mid semester and at the end of semester did contribute significant unique variance to the prediction of final grade.

These findings suggest issues that are important to classroom instruction in the basic course. Since at least 75% of all students report CA in the public speaking context and 15-20% report high trait CA (across all contexts) (McCroskey, 1977 & 1982; Richmond & McCroskey, 1995), instructors often seek instructional strategies and interventions to help students reduce CA levels. This study suggests that it may be more important to help students enrolled in a required beginning public speaking course increase their S-E beliefs that they possess the skills necessary to succeed in a public speaking course than to focus directly on reducing their public speaking anxiety. Since CA and S-E are related, CA will decrease as S-E increases.

This study also suggests that it is not S-E for class at the beginning of the term that predicts grade, but rather S-E at mid-term and end-of-term that predicts grade. Consequently, it may be prudent for instructors to develop learning strategies and interventions to help apprehensive individuals increase S-E before mid-semester in a public speaking course.

A few suggestions for instructional strategies that could increase S-E in the public speaking classroom include: 1) teaching a "communication orientation" instead of a "performance orientation," 2) showing several peer models of speeches to students, and 3) assigning several mini-speeches (all used very early in the course). One way of increasing students' S-E could include helping students view (via lecture or readings) public speaking from communication orientation instead of

performance orientation. According to Motley (1991 & 1995), a performance orientation views public speaking as a situation demanding a perfect, aesthetic impression, flawless oratorical skills or eloquence, and a formal, polished, brilliant delivery. On the other hand, the communication orientation views public speaking as a communication encounter that relies on the ordinary communication skills that people use in everyday conversation.

Motley (1991), reports significant reductions in anxiety levels when college students believe they already have the basic conversational skills necessary to deliver a speech. It may be that the communication orientation actually increases S-E which varies with CA. Helping students believe they have the basic skills necessary to become effective speakers does not negate the need for skills training in public speaking, but instead prepares students to learn by increasing their S-E and confidence in their ability to succeed in a class.

Research has established the benefits of peer modeling as an instructional strategy for increasing student S-E (Zimmerman & Ringle, 1981). For public speaking classes, this strategy could include the presentation of taped model speeches. Although most public speaking classes include critical analysis of speeches, peer model speeches can convey to students that they are capable of presenting a speech, and can motivate them to attempt giving a speech.

The S-E literature has shown that peer models increase S-E better than instructor models or no models (Schunk & Hanson, 1985; Schunk, Hanson, & Cox, 1987). Multiple models increase the likelihood that students will see themselves more capable than at least one of the models (Schunk, 1989). Therefore, showing at least three model speeches that are judged to be above-average, average, and below average could serve to in-

crease S-E, reduce CA, and increase the level of student performance.

Another instructional strategy that could increase S-E for public speaking students includes the assignment of ungraded mini-speeches (Dwyer, 1996 & 1997). Several one-minute structured speeches, "give students an opportunity to speak on a familiar topic, in a less conspicuous manner than in a formal public speaking situation, while becoming familiar with the audience, without being evaluated, and in a way that precludes failure and promotes success" (Dwyer, 1996, p. 2). Although, the mini-speeches were designed to reduce the situational aspects that heighten anxiety, they may also increase students' S-E. As Schunk (1989) pointed out, at the start of any new learning activity, students differ on their S-E for acquiring new skills or knowledge, but as they progress in the task, cues such as close-at-hand goal attainment and instructor feedback, provide them with a basis to assess S-E for further learning. Thus, mini-speeches help students practice the public speaking skills they have already acquired from everyday communication and provide cues for successful and immediate goal attainment. In turn, students could increase their S-E for future speaking assignments.

In this research report, S-E has been considered an independent variable in its effect on grades. However, level of S-E could also be considered a dependent variable in that grades and performances can raise or lower S-E for future tasks and courses (Schunk, 1989). Consequently, any instructional feedback, including grades, or strategies, including the three discussed here, that positively cue students on their performance and goal attainment can effect S-E as the dependent variable, which in turn can effect grade.

Future research should confirm the relationship between CA and S-E, as well as address instructional

methodologies that increase S-E. As Colby, Hopf, and Ayres (1993) have already recommended, restructuring interventions to enhance their impact on S-E may improve the ability of treatments to reduce CA. "Such a goal is desirable given the debilitating effects that CA can have on the personal and professional lives of those who suffer from it" (Colby, Hopf, and Ayres, 1993 p. 228).

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