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Comparisons of Speech Anxiety in Basic Public Speaking Courses: Are Intensive or Traditional Semester Courses Better?

Mary Z. Ashlock
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The study of public speaking is considered by many to be the foundation upon which the discipline of communication was built; it has evolved into a vast literature of experimental and expository studies (Bodie, 2010). Communication apprehension (CA) is defined as “an individual level of fear or anxiety associated with either real or anticipated communication with another person or persons” (McCroskey, 1977, p. 78) and is an integral part of the study of public speaking. This fear or anxiety is heightened when individuals go beyond basic communication interactions to deliver public speeches. A factor to consider in CA is whether intensive courses such as three- and five-week summer courses actually increase students’ CA instead of helping lower students’ apprehension. In order to address this factor, the authors reviewed the extant literature on intensive courses to build the rationale for this study. To begin, Scott and Conrad (1992) reviewed 50 studies of intensive courses and found mostly equal or superior learning outcomes in comparison to traditional-length courses. Since this groundbreaking study, intensive courses have been found to be rewarding for students and under favorable conditions can create a more focused, collegial, relaxed, motivating, concentrated,
memorable, and continuous learning experience compared to semester-length courses (Scott, 1995). Given these factors, it seems logical that students with moderate CA would respond favorably within an intensive course setting.

This article seeks to explore how intensive basic public speaking courses may be as effective and in some cases may appeal more to higher CA students. Its goal is the development of an exploratory study that could be used to help explain a significant effect of the basic speech intensive course on reducing CA. To begin, the authors present historical data about CA and academic achievement, followed by information about physiological factors in communication and its relation to techniques to reduce CA. The authors then present primary data and further research on intensive courses that lead to the practical implications for basic course directors and administrators.

**Communication Apprehension and Academic Achievement**

Seamon (2004) found that students in intensive courses initially performed significantly better than students in the semester-length courses in posttests on content and questions on higher-order learning. Researchers reached a similar conclusion: intensive courses appeared to provide equivalent or superior long- and short-term learning outcomes compared to traditional courses across a variety of disciplines (Daniel, 2000). In another study examining academic achievement, CA in the instructional environment was studied by considering three CA levels (high, moderate, and low)
relative to various performance situations in a basic communication course. Students were placed in a high CA, moderate CA, or low CA group based on their score on the Personal Report of Communication Apprehension. Correlational analysis indicated there were significant differences in achievement indices among all three CA groups on the first two of four performance assignments and on the final course grade (Powers & Smythe, 1980). Communication apprehension has also had profound effects on college student retention and success. A four-year longitudinal study found that CA has a substantial impact on the probability of high CA students’ survival in college, and this impact adds to the case favoring the provision of training programs to assist such students to overcome their anxiety (McCroskey, Booth-Butterfield, & Payne, 1989). In addition, it is important that the basic communication course offer consistent instruction so students do not receive disparate pedagogical experiences (Morreale, Hugenberg, & Worley, 2006). This could relate to students with CA because they could better grasp the concepts and techniques needed to be successful in public speaking courses. Information about physiological factors must also be considered when exploring effects of the basic speech intensive course on reducing CA.

**Physiological Factors in Communication Apprehension**

Physiological factors have helped researchers to identify signs of CA. Scholars have suggested that biological factors, such as temperament, influence human social behavior, particularly in the formation of traits...
such as CA (Beatty, Heisel, Lewis, Pence, Reinhart, & Tian, 2011).

The relationship between trait-like CA and resting alpha range asymmetry in the anterior cortex is also now being studied, and partial correlations have been revealed between CA and EEG scores. Although research in cognitive neuroscience suggests that asymmetry in the anterior cortex is a relatively stable, in-born, infrastructure of emotion, some studies indicate that asymmetry can be increased by temporary induced (Beatty et al., 2011).

Heart rate as it relates to CA has also been examined. Results suggest that the heart rates of anxious speakers were significantly higher than those of non-anxious speakers when both performed in low-intensity situations. Heart rates, however, were not different for anxious and nonanxious speakers when performing in high-intensity situations (Beatty & Behnke, 1991).

Other recent developments have provided new information about speech anxiety patterns among high- and low-anxiety speakers. One study examined the relationship between public speaking anxiety and physiological stress indicators at four different stages in the delivery of a public speech. Public speakers’ gastrointestinal body sensations were compared at different times and across different levels of psychological trait anxiety. The results showed significant differences in both the magnitude and the patterns of somatic responses between high- and low-trait anxiety groupings (Witt, Brown, Roberts, Weisel, Sawyer, & Behnke, 2006). The effects of interpersonal communication as a source of comfort (i.e., amelioration) on the physiological stress associated with giving an in-class speech were studied using corti-
sol as an objective measure of stress reactivity. Salivary cortisol was collected from students. The study found that participants in the distraction condition experienced significantly less stress than participants in the control condition (Priem & Solomon, 2009). Given the physiological factors present in CA and significant moderate communication apprehension scores from students enrolled in intensive public speaking courses in this current study, it is critical for basic course instructors and administrators to use techniques that reduce CA.

**Techniques to Reduce Communication Apprehension**

A national survey was conducted to determine what methods instructors use to treat CA. The results showed that instructors treat apprehensive students during regular class time by 1) concentrating on a skills-training approach to teach the necessary speaking skills, 2) by creating a supportive and positive classroom environment, 3) by recognizing students’ CA as normal, and 4) by using teaching techniques that help students handle feelings of apprehension (Robinson, 1997). This section will discuss the techniques to reduce CA including self-monitoring, visualization, videotaped feedback, impromptu speeches, sensitization and practicing speeches.

Researchers have investigated the underlying mechanisms affecting the accuracy with which public speakers communicate performance-related anxiety to their audiences. One study found that the self-monitoring construct is important for understanding how audiences decode a speaker’s emotional state, but the speaker’s ability to self-monitor anxiety was not confirmed (Saw-
Another study compared the influence of basic oral interpretation courses and basic public speaking courses on students’ self-reported levels of CA. The findings suggested that the basic course in oral interpretation may help reduce student levels of CA (Rose, Rancer, & Crannell, 1993).

Visualization treatment and its effect on public speaking anxiety has been the subject of research. One of the initial studies utilized pre- and posttests on two experimental groups and one control group. The results indicated significant differences based on the presence or absence of the visualization treatment as well as how much experience an individual has in public speaking (Byers & Weber, 1995). Researchers began questioning whether speech anxiety affects only presentation behavior, or if it also affects the ways in which people prepare their speeches (Daly, Vangelisti, & Weber, 1995). Researchers have continued to examine speech preparation processes and speech apprehension. In a related study, results showed students with high CA spent more preparation time on noncommunication-oriented activities (e.g., speech outlines) than students with low CA. In contrast, students with low CA reported spending more preparation time on communication-oriented activities (e.g., practicing speech introductions) than did students with high CA. In addition, students with high CA reported spending more time preparing their speeches but received lower grades than students with low CA (Ayres, 1996).

Researchers have continued to examine how videotaped feedback affects students’ self-reported levels of communication competence and apprehension. Since the early 1950s, researchers have conducted extensive

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studies on the use of television in education. Results have shown that the use of videotaping students in public speaking can make a positive or negative contribution, depending upon the methods used (McCroskey & Lashbrook, 1970). Students reported that their improvements were greatest in classroom settings; self-directed videotape feedback had a limited impact on students’ perceived improvements, based on their initial levels of competence and apprehension (Hinton & Kramer, 1998).

One study found that subjects who completed an impromptu speech significantly lowered their situational CA. The point from this study is that when given the opportunity to deliver an ungraded impromptu speech, students may be able to concentrate more on controlling their CA and improving their speaking skills rather than worrying about their grade (Rumbough, 1999). The literature indicates that although numerous techniques are available to help students manage high CA, the difficulty is determining which technique will target a student’s specific needs. The results of testing a multidimensional model showed that there was a significantly greater reduction in CA levels when teaching students to self-select treatment techniques versus only using traditional skills training (Dwyer, 2000).

Researchers have focused on the process called sensitization in which individuals experience increased psychological discomfort, usually during the first moments of their presentations. One study explained how individuals experienced patterns of excessive worrying during their presentations. Results indicated that these students report more worrisome thoughts during public speaking than those who have become progressively
more comfortable making public speeches (Addison, Clay, Xie, Sawyer, & Behnke, 2003).

Another investigation included two studies that related anticipatory public speaking anxiety to the nature of the speech assignment. The purpose of the study attempted to determine if differences in anticipatory anxiety in public speakers existed for each of the milestones, or narrowband measures. The hypotheses were supported in both trait and anxiety studies where certain differences in anticipatory speech anxiety were detected among different types of informative speeches (e.g., impromptu, extemporaneous, and manuscript reading; Witt & Behnke, 2006).

The final technique of practicing speeches before an audience to improve performance has also been examined over the years. Students who practiced their speech before an audience earned an average of three additional points on their speech evaluation scores—a 7.5% increase with the evaluation scale used. Practicing speeches before a mirror was also regarded as a potentially effective technique (Smith & Frymier, 2006).

In addition to these techniques to reduce CA, Steven Spurling conducted a study on intensive courses to identify what increases student success (Spurling & City College of San Francisco, 2001). Data was collected on the performance of students in English, mathematics, and English as a Second Language (ESL) classes during an intensive summer term and was compared to students enrolled in similar classes during the spring and fall terms. The results showed that both compression (i.e., shortening the length of terms) and intensity of study (i.e., more hours per week of class within the subject matter area) positively influence student success.
independently of each other. Spurling's work points to a possible connection between intensive courses having a positive impact on students with moderate CA, especially in the basic communication courses. It is important to recognize “Intensive courses have become a mainstay of higher education. . . . Although intensive courses have become quite common, many academic and administrative pundits condemn their use and claim that these formats sacrifice academic rigor and learning. . .” (Scott, 2003, p. 29). In contrast to negative beliefs concerning intensive courses, the overall course ratings on student evaluations are higher for intensive courses than for traditional courses (Kucsera & Zimmaro, 2010). Given that students take intensive courses to fulfill their intrinsic sense of accomplishment and to have external rewards such as benefits and avoiding punishments (Bahl & Black, 2011; Deci & Ryan, 1985), it makes sense students with moderate to high CA may choose to enroll in intensive courses for a shorter time span.

**PURPOSE OF THE STUDY**

The purpose of this exploratory, quasi-experimental study is to determine the differences in CA levels of students in intensive public speaking courses versus traditional 15-week semester courses. According to the literature, a number of factors have affected students’ CA levels; however, little research has examined intensive versus traditional classes. Fueled by previous research findings on intensive classes, we designed the current study to explore the following question: Do students en-
rolled in intensive public speaking courses report higher levels of CA?

**METHOD**

**Participants**

Participants in this study were 722 undergraduate students at a midsize Southern university distributed among 70 sections of an introductory public speaking course that is required for all students at the university. Each section of the course had a maximum enrollment of 24, allowing for a larger data set; however, if students withdrew from the class or were not present to complete the pretest and posttest, the data was not used. No incentive was offered to students other than asking them to participate for purpose of research. Of the total sample analyzed in the study, 358 participants (50.4%) were male and 364 participants (49.6%) were female. In terms of student rank, 300 participants (41.6%) were freshmen, 287 (39.8%) were sophomores, 81 (11.2%) were juniors, and 54 (7.5%) were seniors. Participants were recruited from the fall semester 15-week courses (n = 371), spring semester 15-week courses (n = 276), summer semester 3-week courses (n = 40), and summer semester 5-week courses (n = 35).

**Procedure**

Participants were met by either the principal investigator or co investigators in basic public speaking classes before completion of their first assigned classroom speech during the second week of class for the 15-week classes or within the first several days of the 3- and 5-
speech anxiety in public speaking courses

week classes. Students were informed of the overall purpose of the study, and were also informed that their responses would be confidential. Participants were asked to complete Scantron “bubble” sheets to record identifiers: age, race/nationality, gender, rank in school, and student ID numbers were used throughout the procedure and confidentiality was maintained. After 20–30 minutes, the investigator collected the surveys and data collection tools. The participants were informed that the investigators would return to conduct the same survey after the participants’ last classroom speech. These speeches occurred during the last week of the 15-week classes and the last two days of the 3- and 5-week classes.

Instrument

Students were asked to complete the Personal Report of Public Speaking Anxiety (PRPSA), developed by James C. McCroskey (1970). This was the first scale developed in work with CA and it remains highly regarded and used in public speaking texts today (e.g., Ferguson, 2008). Basic communication course instructors continue to use this survey to help students identify and understand their CA levels. The authors’ methods included collecting data from this survey and conducting statistical tests to determine compare CA levels in traditional and intensive courses and current trends in public speaking data. This survey consists of 34 statements, and has a five-point scale in which students indicate “strongly agree,” “agree,” “neutral,” “disagree,” or “strongly disagree.” Sample items include: “While preparing for giving a speech, I feel tense and nervous”; “I feel that I am in complete possession of myself while
giving a speech”; and “While giving a speech, I get so nervous I forget facts I really know.” Although other instruments are more widely used to measure CA in group settings, the original PRPSA is highly reliable (alpha estimates > .90) and focuses only on public speaking anxiety (McCroskey, 1970). The quasi-experimental methodology used had an adequate sample size, sufficient time between the pretest and posttest, and used standard significant statistical tests. In order to ensure reliability, the researchers used uniform instructions and administered the survey in the most similar ways possible with each basic course instructor.

**Analysis**

The researchers used standard correlation measures (Pearson, Spearman-Rho, and ANOVA) to determine if there was a correlation between students’ public speaking apprehension and class length, and the semester the class is offered. Students were tested at the beginning and the end of the class in a quasi-experimental research design to determine if the class had an effect on PRPSA scores.

**RESULTS**

The study investigated the possible effects of basic public speaking courses on students who were enrolled in intensive and traditional public speaking courses. The range of PRPSA scores in the instrument used were High: > 131; Moderate: 98–131; and Low: < 98. The mean score for the PRPSA instrument was 114.6. The overall results from this study were a mean pretest score of 110.05, and a mean posttest score of 96.45.
Table 1
Overall PRPSA Pretest/Posttest Scores of High, Moderate, and Low CA

<table>
<thead>
<tr>
<th>CA</th>
<th>Mean</th>
<th>SD</th>
<th>Percentage</th>
<th>Significance</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High CA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>143.71</td>
<td>9.47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>117.59</td>
<td>21.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26.12</td>
<td></td>
<td>18.18%</td>
<td>0.031</td>
<td>1.55</td>
</tr>
<tr>
<td><strong>Moderate CA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>114.05</td>
<td>9.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>97.56</td>
<td>17.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.49</td>
<td></td>
<td>14.46%</td>
<td>0.000</td>
<td>1.17</td>
</tr>
<tr>
<td><strong>Low CA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>82.44</td>
<td>12.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td>81.46</td>
<td>18.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.98</td>
<td></td>
<td>1.19%</td>
<td>0.000</td>
<td>0.062</td>
</tr>
</tbody>
</table>
Our findings show a significant effect of the basic speech course on reducing CA (as evidenced by the effect size). Table 1 shows the overall PRPSA pre- and posttest scores for high, moderate, and low CA. In the high CA group, the posttest mean was 117.59, which shows scores in the moderate CA range towards the completion of the basic public speaking course. The moderate CA group posttest mean was 97.56 at the completion of the course, which shows the scores in the low CA range. Finally, the low CA group posttest mean was 81.46, which only had a .98 change in the mean score.

The results of Table 2 show a significant effect, lower than a 0.0001 probability, that the differences in the pretest and posttest were due to random effects. Table 2 specifically shows the overall PRPSA pre- and posttest scores for class types for the 15-week, 3-week and 5-week courses. In the 15-week group, the posttest score was 97.07 at the completion of the course, which shows the scores in the low CA range. The 3-week group posttest score was 102.19 at the completion of the course, which shows the score in the moderate CA range. Finally, the 5-week group posttest score was 97.03 at the completion of the course which shows the score in the low CA range. Overall then, the score from the 15-week group was in the low CA range and the intensive 3-week and 5-week groups were in the moderate and low CA range.

**DISCUSSION**

This study provides evidence for the changes in CA for students who take both intensive and traditional courses. The authors examined students’ scores in the
### Table 2

**Overall PRPSA Pretest/Posttest Scores for Class Types**

<table>
<thead>
<tr>
<th>Overall</th>
<th>N</th>
<th>Pretest</th>
<th>Pretest SD</th>
<th>Posttest</th>
<th>Posttest SD</th>
<th>P Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>722</td>
<td>110.05</td>
<td>23.81</td>
<td>96.45</td>
<td>22.3</td>
<td>&gt;0.000</td>
</tr>
</tbody>
</table>

**Class Type**

15 Week  | 647 | 109.13  | 23.83      | 97.07    | 22.74       | >0.000   |
3 Week    | 40  | 120.87  | 20.76      | 102.19   | 15.845      | >0.001   |
5 Week    | 35  | 114.71  | 23.75      | 97.03    | 20.677      | >0.000   |

**Semester**

Fall     | 371 | 107.12  | 23.29      | 95.80    | 23.03       | >0.000   |
Spring   | 276 | 111.83  | 24.33      | 96.43    | 22.37       | >0.000   |
Summer I | 40  | 120.87  | 20.76      | 105.23   | 16.47       | >0.001   |
3 Week  |     |         |            |          |             |          |
Summer II| 35  | 114.71  | 23.75      | 93.46    | 17.63       | >0.000   |

* Anything less than 0.05 is considered significant
intensive and traditional courses and Table 2 lists our findings, which add new data to research on intensive courses and public speaking. To begin, this study’s findings provide new understanding regarding how faculty members generally believe that students in intensive courses have higher apprehension, and it is interesting that students in the three- and five-week courses did have a moderate CA at the beginning of the course. However, students in both intensive and traditional public speaking courses all had posttest means in the moderate or low CA categories. We note that our study supports previous research from Scott and Conrad (1992) which had recognized issues of the success of intensive courses. In addition, data from Anastasi (2007) indicated that student performance was not less significant for abbreviated summer courses compared to the same courses taken during a regular 16-week semester even when the instructor, teaching style, contact hours, exams, and other assignments were constant. In fact, some comparisons showed that performance in summer courses may have been superior to full-semester courses (Anastasi, 2007).

What was interesting, however, was that participants in this study are all enrolled in public speaking courses versus the other courses mentioned in the literature for intensive courses (e.g., English, business, mathematics, and ESL). To the authors’ knowledge, this is the first study to document both CA and intensive courses.

The implications of this research can be applied to intensive courses. In the present study, this discussion arose when determining whether an intensive course was effective and how much an instructor contributed to
the students’ levels of apprehension over the course of three- and five-week terms. Our findings add potent testimony in support of attributes of high-quality intensive courses, which include instructor characteristics, teaching methods, classroom environment, and evaluation methods. When these attributes are present during an intensive course, students prefer this learning environment versus a traditional course. However, when these attributes are not present, students reported intensive courses to be boring and painful experiences (Scott, 2003). This is a key area for basic course instructors and administrators because the current research suggests that basic public speaking courses have an impact on students’ CA scores, especially in intensive courses. These findings suggest other factors in the environment, as well as processes to reduce CA, need to be considered. Moreover, the study of subject matter content, pedagogy, and instructional communication are of equal importance in preparing an individual to be an effective educator in any field and at any level of instruction (McCroskey, Richmond, & McCroskey, 2002). Instructors need to be particularly aware of this in intensive classes where CA may be at a moderate level overall.

**LIMITATIONS**

There were two limitations in this study. The first limitation was the public speaking classroom. Some instructors address this issue by holding basic public speaking classes at a variety of speaking venues within the university. Another limitation was survivor bias. Due to students dropping out of the course in each sec-
tion, a number of students did not complete the study. Students with CA are more likely to drop out and try the course again at a later time so the researchers may have missed out on data with the truly high CA students. Also, given the large sample size, significance would be expected. The researchers controlled this by taking survivor bias into account and by drilling down into the data by semester, gender, traditional 15-week semester courses, and shorter 3- and 5-week courses. The significance held at the more granular levels. Significance was also present during the first surveys, but not in the second survey. This indicated that an effect (e.g., the class) was alleviating differences in the public speaking anxiety pretest and posttest scores.

**Future Research**

There is more research to be done, especially as there are increasing numbers of intensive and traditional courses offered as part of a university’s general education requirements for graduation. A typical profile of students enrolled in public speaking courses may be useful to instructors to help gauge the students’ CA levels and assess ahead of time which techniques to use. Faculty could also have students indicate their majors in the demographic section for the public speaking courses. This may assist faculty and staff in other academic areas in student retention studies as the researchers of this study would argue high CA may make students believe they could not be successful in school and thus they drop out of a higher education. Conversely, the researchers of this study would argue re-
ducing CA could increase confidence in the student and thus they would remain in school.

A second area to explore is to group the students into high, moderate, and low pretest CA. Researchers could then compare their posttest CA scores to pretest scores. The idea would be to see if students with similar CA scores would feel more comfortable—and therefore reduce their CA scores—if they were in a class of students with mixed CA scores. Or are students with low confidence in their speaking skills intimidated by students with better speaking skills, and therefore feel discouraged from trying to improve?

A final area of future research is a longitudinal study. These students could be contacted five years from now and administered the PRPSA to find out if their CA scores had dropped and which factors may have had an effect. Recent studies continue to support the idea that individuals with high CA prefer, expect, and tend to hold jobs that require little communication with others, whereas those with low CA tend to be successful in organizational positions where considerable communication is expected from them (Bartoo & Sias, 2004).

**CONCLUSION**

This study sought to determine whether students enrolled in intensive public speaking courses reported higher levels of communication apprehension after exposure to intensive and traditional courses. The study compared students’ scores in intensive and traditional courses. The findings indicated that students enrolled in intensive public speaking courses had significant moderate CA scores compared to students enrolled in 15-
week semester courses. Basic course instructors and administrators involved in teaching numerous sections of public speaking should continue to monitor and evaluate the course structures and the environments in which students need to develop public speaking skills while dealing with CA. This is especially important given the continuous development of new technologies. Future research can assist as we continue to try to identify and reduce communication apprehension.

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