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Brief Report
Assessing Success: The Impacts of a Fundamentals of Speech Course on Decreasing Public Speaking Anxiety

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Despite assessment’s prominence in higher education, many communication departments still find its implementation problematic. In this case study, we answer a call for heightened research pertaining to the best practices for assessment of large, multisection, standardized public speaking courses. We demonstrate the ease with which the basic course can be justified to administrators by citing the course’s significant reduction of students’ Public Speaking Anxiety (PSA) as assessed by one of the discipline’s standard measures of PSA, the Personal Report of Public Speaking Anxiety. Implications include validation of a course design and assessment that provide administration with measures of significant and salient success, and an especially profound positive impact of the course for women.

Keywords: Assessment; Learning Outcomes; Public Speaking Anxiety; Communication Apprehension; PRPSA

In the prevailing academic climate dubbed “The Age of Assessment” (Benjamin et al., 2009, p. 30), assessment of educational objectives and program effectiveness is now infused throughout most higher education institutions, driving intensified public demand for accountability and measurable learning outcomes (Allen, 2002; Ewell, 2009; Kuehl, 2012; Meyer, Kurtz, Hines, Simonds, & Hunt, 2010). As a result,
assessment in the basic course is an issue of significant concern” (Meyer et al., 2010, p. 6). Departments of communication are increasingly faced with the imperative to provide administrations with data to justify the course’s place in the core curriculum and to sustain enrollment caps for manageable class size (Morreale, Worley, & Hugenberg, 2010).

In addition to satisfying administrative demands, assessment can help instructors and departments improve instructional practices and outcomes (Gardiner, 1994; McCroskey, 2007; Meyer et al., 2010; Morreale, Backlund, Hay, & Moore, 2011). Nonetheless, many departments still find assessment distressing, reporting it as the second most pressing problem at four-year institutions (behind consistency among standardized sections), and fourth most-pressing among two-year schools (Morreale et al., 2010). “It is important that we recognize that developing assessment programs is much more difficult for some departments and faculty members than others” (McCroskey, 2007, p. 510), yet dissemination of model assessment plans and best practices research has declined since 2005, leading to a call for a re-engagement in this topic. Morreale et al. (2011) recommended “more publications in scholarly journals, focused on valid and reliable best practices in assessment of student learning outcomes at the program and departmental levels” (p. 266), especially “in multiple sections of the same course” (p. 270).

In answer to that call, this one-shot case study demonstrates the ease with which departments can achieve the goal of justifying the basic course to administrators by using the significant reduction of students’ Public Speaking Anxiety (PSA). PSA is defined as “a situation specific social anxiety that arises from the real or anticipated enactment of an oral presentation” (Bodie, 2010, p. 72). Bodie noted that PSA reduction is one of the purposes of the basic public speaking communication course and a primary strength of the communication discipline. In this study, we employ the Personal Report of Public Speaking Anxiety (PRPSA) (McCroskey, 1970), one of the discipline’s standard measures of PSA, to demonstrate the effectiveness of the basic course in reducing anxiety related to speaking before groups. The PRPSA meets The Council for Aid to Education’s (Benjamin et al., 2009) three criteria for assessment instruments: it possesses strong validity and reliability, is deemed trustworthy in assessing critical skills, and has been proven meaningful to the student learning process.

Regarding the first two criteria, validity/reliability and trustworthiness, the 34-item, Likert-type PRPSA was initially validated in 1970 and has been employed in numerous studies over the past four decades (Allen, Hunter, & Donohue, 1989; Beatty, 1988; Friedrich, Goss, Cunconan, & Lane, 1997; McCroskey, 1972; Pribyl, Keaten, & Sakamoto, 2001; Rubin, Rubin, & Jordan, 1997). In addition, the measure has been utilized in research efforts in Japan (Pribyl et al., 2001) and Puerto Rico (McCroskey, Fayer, & Richmond, 1985).

Regarding the third criterion for assessment instruments, measurement of outcomes meaningful to the learning process, PSA is the most common form of communication apprehension (CA) (Richmond, Wrench, & McCroskey, 2013), affecting nearly everyone to some extent (McCroskey, 1970, 1972). Therefore,
measurement of PSA reduction in the basic speech course is highly relevant to the
learning process, because the course is designed to improve public speaking for
personal development and future employability (Emanuel, 2005). PSA’s symptoms
range from sweating, muscle tension, increased heart rate (Bedore, 1994; Nutt &
Ballenger, 2003), “shaking knees, quivering voices, nausea, and the inability to speak”
(Witt et al., 2006, p. 87), to heart palpitations, dizziness, and confusion (American
Psychiatric Association, 2000; Daly, McCroskey, Ayres, Hopf, & Ayres, 1997). For the
30–40 percent of Americans who suffer from high levels of PSA, it can cause
relational, emotional, and even financial problems due to anxiety so severe that it
impairs their ability and willingness to speak publicly, potentially hindering career
aspirations, personal relationships, and self-image (McCroskey, 1984). Women have
historically reported higher levels of PSA than men (Friedrich, 1970; McCroskey,
Simpson, & Richmond, 1982); therefore, the implications of reducing PSA may be
even stronger for female students, hence contributing to the “debate surrounding
gender differences across modes of assessment” (Woodfield, Earl-Novell, & Solomon,
2005, p. 35).

By design, the PRPSA “is used to measure trait anxiety [as opposed to state
anxiety] and includes a variety of anxiety stimuli specific to public speaking
environments” (Smith & Frymier, 2006, p. 118). Most speakers experience at least a
small amount of PSA in relation to a particular speaking event; in these cases, PSA is
considered a temporary psychological state that passes after the speaking event has
concluded. By contrast, the enduring trait of Public Speaking Anxiety may extend
across public speaking situations for some apprehensive individuals and even
manifest itself when no specific speaking event is planned. Therefore, state anxiety
is a more “transitory state or condition of the organism which fluctuates over time,”
while trait anxiety is more enduring—a “unitary, relatively permanent personality
characteristic” (Spielberger, 1966, p. 13). Illuminating these distinctions allows basic
course directors an opportunity to design course curricula based around treatments
that will enact genuine change within the trait of individual levels of PSA.

Individuals with trait anxiety are not just anxious about communicating in the
basic public speaking course, but also nervous about speaking in other public
speaking situations (Booth-Butterfield & Booth-Butterfield, 2004). Accurate and valid
assessment of the reduction of PSA relates directly to the goal of the basic public
speaking course as a means to impact students’ long-term public speaking
experiences. Considering the research on the implications of PSA and the success
rate of some of its treatments (Duff, Levine, Beatty, Woolbright, & Park, 2007; Finn,
Sawyer, & Schrodt, 2009; Hopf & Ayres, 1992), a speech communication program can
enhance its ability to serve this apprehensive population through research designed to
assess whether that school’s basic public speaking course is effective at reducing
apprehension or anxiety. This research can also identify whether PSA and treatment
needs and outcomes differ for students of differing demographic backgrounds. One
controversial, yet consistent finding in PSA reduction research is that biological sex
impacts PSA (Friedrich, 1970; Lustig & Andersen, 1990; McCroskey et al., 1982).
Biological Sex and PSA

It is possible that the effective reduction of PSA is a greater concern for female students than for males, as research has shown small but salient differences in PSA between females and males. For this reason, it is important to assess the changes in PSA by biological sex in the basic course. Compared with males, females, historically, have consistently reported higher PSA (Friedrich, 1970; McCroskey et al., 1982), and higher CA in general (Behnke & Sawyer, 2000; McCroskey et al., 1982). A meta-analysis of communication apprehension studies confirmed these findings (Lustig & Andersen, 1990). McCroskey et al. (1982) concluded that “Although the variance attributable to the biological sex variable, 2 to 4%, is not large, it may represent somewhat of a barrier to advancement of women within our society generally” (p. 133). Given the aforementioned findings that higher levels of PSA can hinder college and career aspirations as well as overall life satisfaction (Emanuel, 2005; McCroskey, 1984; Nutt & Ballenger, 2003), assessment of the basic public speaking course’s impacts on lowering PSA for female students is warranted. Therefore, in the current study we examined and compared pretest and post-test PSA for men and women.

A Blended Approach to PSA Treatment

Many basic public speaking courses across our discipline infuse PSA treatments into their course design and, as a result, have reduced the anxiety of “literally thousands of individuals” (Richmond, Wrench, & McCroskey, 2013, p. 106). The course assessed in this study was a multisection, standardized course (e.g., it employed the same text, Power Point © presentations and lectures, rubrics, and exams across all sections). A two-week training session and weekly training meetings were required for all new instructors to calibrate instruction and critiques. Part of the training directed all instructors to identify one or two strengths about each student’s speech for every constructive criticism or limitation discussed, and to elicit positive feedback and constructive criticism from the students’ peers as they critique each other’s presentations. All speeches were assigned to be delivered extemporaneously—the most anxiety-producing mode of speaking (Witt & Behnke, 2006). The course design blended elements of exposure therapy, cognitive modification, and skills training—a different treatment for each “proximal cause” of PSA (Bodie, 2010, p. 86). This blend is “more effective than any single method” (Pribyl et al., 2001, p. 149) at reducing PSA, as well as maximizing both immediate and long-term effects of treatment (Bedore, 1994).

The treatment plan in the assessed course was threefold: Exposure therapy was designed to treat psychological arousal, cognitive modification addressed negative thought patterns, and skills training sought to increase aptitude (see Bodie, 2010). The course began with a relatively simple speaking situation followed by increasingly challenging speaking experiences “to reduce reactivity by graduated exposure to speaking situations of greater potential stimulation” (Bodie, 2010, p. 87). Additionally, every time a student gave a speech or discussed his or her topic, ideas, or source material with the instructor or other students, he or she was engaging in this type of “repeated exposure” therapy. The course design also involved elements of cognitive
modification such as that tested by Fremouw and Scott (1979), training students to recognize negative attitudes about public speaking and replace them with positive speaking experiences and strengths-focused feedback. PSA readings, a Power Point presentation and discussions offered the students a restructured, alternative view of anxiety as a normal and frequent human trait. Students were given opportunities to practice “realistic thinking” (Booth-Butterfield & Booth-Butterfield, 2004, p. 81) acknowledging that the problem of anxiety exists, and acknowledging one’s challenges as a speaker, but viewing these challenges through a strengths-based lens. This newly framed view along with the instructor’s encouraging feedback offered the student reassurance, allowing for improved attitudes toward PSA and, hence, toward public speaking. Finally, competence training inherent to the course built public speaking skills and reduced communication anxiety (Kelly, 1997).

We used empirical methods to conduct a valid assessment of the course’s impact on students’ trait-like PSA. In light of the literature regarding PSA’s symptoms, measurement, and treatment, we posed the first hypothesis:

H1: In a basic public speaking course that employs exposure therapy, cognitive modification, and skills training, students will have significantly lower trait-like PSA scores upon completion of the course than they had upon entering the course.

Because the reduction of PSA may potentially be more pronounced for women than for men, we explored the possibility of biological sex differences in PSA scores. Though Kelly and Keaten (2000) asserted that genetics alone is not a valid predictor of PSA, previous research findings have indicated otherwise (Friedrich, 1970; Lustig & Andersen, 1990; McCroskey et al., 1982). Therefore, we posed two research questions to investigate these inconclusive findings:

RQ1: Upon entering a basic communication course, will the trait-like PSA scores of female students be significantly different from the scores of male students?

RQ2: Upon completing a basic communication course, will the trait-like PSA scores of female students be significantly different from the scores of male students?

Method

Participants

Participants in this study (N = 468) were enrolled in the previously discussed, multisection, standardized basic public speaking course at a midsized Midwestern university during any of four consecutive semesters. They consisted of undergraduate students (n = 191 males, n = 273 females, and n = 4 missing data) who opted to participate in exchange for extra credit. They ranged in age from 18 to 41 (M = 18.71, SD = 1.87). Because the course met a university general-education requirement, a large variety of student majors were represented.
Procedures

During the first week of classes, a link to the measurement instrument and implied consent letter required for human subject research was emailed to all class instructors, who then emailed the letter with the link to all of their students and announced a 5-point extra credit opportunity for those who completed the questionnaire during two timeframes (once at the beginning of the course, and again during the final week of class).

Measurement

PSA was operationalized for empirical analysis and pretest/post-test comparison by utilizing McCroskey’s (1970) 34-item Personal Report of Public Speaking Anxiety (PRPSA). We offer a brief justification of our choice of this particular instrument: According to the National Communication Association’s publication Large Scale Assessment in Oral Communication P-12 and Higher Education (Morreale & Backlund, 2007), several measures have been created to assess anxiety and apprehension. One widely used measure is McCroskey’s (1982) Personal Report of Communication Apprehension-24 (PRCA-24) (Morreale & Backlund, 2007), which has strong validity for assessing general CA or anxiety in multiple communication contexts (Dallinger, 2007b). However, for studies specific to PSA, McCroskey recommended the PRPSA, as it is a one-dimensional measure of trait-like PSA (Bodie, 2010). Of the PRCA’s 24 items, only six assess public speaking anxiety, while all 34 items on the PRPSA focus directly on PSA. The PRPSA “generates high-reliability estimates (x > .90) [and] 10-day test–retest reliability =.84” (Bodie, 2010, p. 74). Comparatively, the Stroop Test for Public Speaking Apprehension (Ayres & Sonandré, 2002) has proven reliable and valid, yet is difficult to measure on a large scale (Wein, 2007). Other measures like the Communication Anxiety Inventory (Booth-Butterfield & Gould, 1986) and the Receiver Apprehension Test (Wheeless, 1975) have primarily been used to conduct empirical research rather than assess course outcomes (Dallinger, 2007a, 2007c). Finally, the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is generally reliable, but its primary goal is to measure anxiety in clinical settings (American Psychological Association, 2013), whereas the PRPSA is specifically designed to measure PSA (Bodie, 2010). All these instruments have proven valid and reliable, fitting the scope and context of the studies in which they were employed. However, for the purpose of this study, we selected the PRPSA (McCroskey, 1970) because it optimizes the Council for Higher Education assessment criteria (Benjamin et al., 2009) in assessing the strength of our large, standardized public speaking course.

Participants were asked to rate each of the PRPSA’s 34 items on a 5-point Likert-type scale (e.g., “When preparing for a speech, I feel tense and nervous.”). To avoid a response-set pattern, the items varied in valence so that a “5” indicates the highest level of anxiety for some items and the lowest level for others. In the current study, the reliability coefficient for the pretest was $\alpha = .96$ ($M = 114.83$, $SD = 22.52$), and the post-test was $\alpha = .95$ ($M = 102.19$, $SD = 51.72$).
Results

The research hypothesis predicted that students in the course would have significantly lower speaking anxiety upon completion of the class than they had upon entering the course. A paired-samples t-test indicated that the post-test mean score of 102.19 (SD = 51.72) was significantly lower than the pretest mean of 114.83 (SD = 22.54). Thus, H1 was supported (t[468] = 5.37, p < 0.001).

The first research question inquired whether female students entering the course would have different levels of trait PSA than male students. An independent samples t-test showed that female subjects had significantly higher levels of speaking anxiety during the pretest measurement (M = 119.28, SD = 21.99) as compared with male subjects (M = 108.80, SD = 21.90). The females’ scores averaged 10.48 points higher than the males’ scores (t[464] = 5.06, p < 0.001). The second research question inquired whether female students completing the course would have different levels of trait PSA than male students. Independent samples t-test results indicate that, though females’ mean post-test scores were still 7.85 points higher than males’, and the scores showed wider variance than males’ scores, the post-test averages did not differ significantly between males (M = 97.71, SD = 20.77) and females (M = 105.56, SD = 65.25) ([t[468] = 1.60, p = 0.11]).

Discussion and Implications

Attention to assessment remains critical as it has been embedded throughout the academy (Morreale et al., 2011), and the results of this study provide the communication discipline with a simple means of providing successful assessment measures of salient learning outcomes for basic public speaking classes. These findings suggest that PSA can be reduced through a well-designed basic speech course, and that assessment of PSA reduction can be simplified by employing one of the communication discipline’s standard measurements, the PRPSA. The PSA scores of students enrolled in this course were an average of 12.63 points lower after the course than at the beginning. McCroskey (1970) stated that the mean PSA for a United States citizen is 114.6, which is very close to this study’s pretest mean of 114.83, showing a striking resemblance between the sampled students and the general population. Therefore, it is not unreasonable to posit that the tested approach’s PSA reduction of an average of 12.63 points is generalizable to other basic and public speaking classes around the country.

Results related to the research questions suggest that females stand to benefit even more than do males, indicated by the finding that the treatment (the course) narrowed or effectively closed the gap between the PSA of members of the biological sexes, erasing statistically significant differences in PRPSA scores. McCroskey et al. (1982) asserted that “any findings linking anxiety to biological sex are very difficult to explain biologically” (p. 129). Such differences are more likely explained by differences in socialization (Pearson, Child, DeGreeff, & Semlak, 2007) and acculturation (McCroskey et al., 1982) with females, perhaps, socialized to be less
confident in public speaking situations. The complexities of biological sex, gender identity, and communication styles may confound the results of the current study relative to public speaking anxiety, and as such would be considered a limitation of the study. In light of the vital role a public speaking course can play in preparing students for the workplace (Johnson & Szczupakiewicz, 1987), these findings bear crucial implications for women’s future career success and life satisfaction. Higher positions generally require more presentations (McCroskey et al., 1982). “To the extent that women are generally more apprehensive...we might expect a lower proportion of them to...advance within occupations in which [public] communication is required” (McCroskey et al., 1982, p. 133). The White House Project: Benchmarking Women’s Leadership (2009) stated that “while women may be participating in the workforce in equal—or in some cases, higher—numbers relative to their male peers, they rarely make it to the top” (p. 3). Could PSA be part of the difference? Future studies should investigate the role of PSA in career aspiration and attainment, as well as the role of socialized gender identification, as opposed to biological sex, in determining PSA. The basic public speaking course can help remedy potential inequities between males and females by easing fears that stand in the way of career advancement. The assessment implications of this finding could very well include bolstered justification of that course’s role among core curricula, as well as gender and assessment issues in higher education.

The findings must, however, be interpreted in light of the limitations created by the research design. Two limitations regard the purely quantitative nature of the PRPSA measure as well as its basis in self-reported data. Analysis can be enriched through the addition of open-ended questions, in-depth interviews, focus groups, observations, or a triangulation of these methods. Additionally, the absence of a control group limits the study in that spurious factors may have affected participants’ levels of public speaking anxiety (e.g., new classes, new environment and lifestyle). A final limitation must be noted. It could be argued that measuring student enrollment at the beginning of the course and at the end indicates state anxiety and not trait anxiety. By definition, a communication trait is more enduring and may recur in the future. Nevertheless, research has indicated that traits can indeed by modified by effective intervention.

Conclusion

McCroskey (2007) stated, “Assessment is here to stay. We use it wisely, or it is worse than worthless” (p. 513). This case study answered a call for research disseminating best practices for assessment of large, multisection, standardized public speaking courses. The study had two major implications: (1) It demonstrated the ease with which the basic course can be justified to administrators by citing the course’s significant reduction of students’ PSA as assessed by a standard measure; and (2) in terms of PSA reduction, the course showed especially pronounced, positive impacts for women.
In an age of assessment, basic course directors and departmental administrators are required to provide evidence of successful student outcomes, justifying their place among core curricula. Data collected using McCroskey’s (1970) PRPSA validated the strong, positive impact of the basic course in the institution studied. The assessment data derived from the PRPSA in this multisection, standardized course have resonated strongly with our administration, especially with regard to the student success model on our campus. As a result, we have received support and resources for a Speech Communication Center/Speech Lab to aid students in further PSA reduction and help us continue to research best practices toward that end. Our findings have also led us to forge relationships with the counseling center to provide resources for highly apprehensive students. Our data continue to show that students, like the general population, are highly apprehensive and benefit from continued focus on the treatment of PSA. Assessment is vital to the sustainability of the basic course, and the PRPSA has proven to be a valid, reliable, and trustworthy measure of meaningful learning outcomes. Basic course programs who fight maintain their presence in the general education curriculum or those who work to sustain their excellence can use assessment measures, like the PRPSA, to validate their success and garner additional support for their programs. Therefore, even the most assessment- reticent departments can gain solid footing through taking the simple measures outlined in this case study.

References


