Assessing the Impact of Learning Communities as an Alternative Delivery Model for the Public Speaking Course

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During the last two decades, American colleges and universities have come under increasing pressure to increase their student retention, progression and graduation rates. As a result, programs that provide enhanced academic and/or peer support for first-year students have proliferated at U.S. institutions of higher learning. One strategy employed by these programs is the learning community (LC), in which the same cohort of students takes several general education classes together. As general education courses at many institutions, Public Speaking and Human Communication are frequently included in LCs.

Learning communities are designed to hasten students' integration into college life by jump-starting the development of academic and social support networks that are considered critical to student retention (Astin, 1985; Shapiro & Levine, 1999). On many campuses, learning communities are also designed to help students see interdisciplinary connections between general education courses. Beyond these shared goals, learning communities may vary in their structure and format from campus to campus. Crookston's (1974) early typology described four types of learning communities: 1)
content-centered communities that focus on a particular discipline; 2) environment-centered communities (often called “living-learning communities” today), that house LC students together in residence halls; 3) person-centered communities focused on personal growth and development rather than disciplinary subjects; and 4) group-centered learning communities emphasizing positive group interaction and democratic processes. Later, Smith, MacGregor, Matthews and Gabelnick (2004) categorized learning communities into three models based on the degree of interconnectivity between faculty members and course curriculum. The “within-course” LC links pre-existing courses, often large lecture classes, with no modifications to course curriculum. A small cohort of students within these classes takes the linked courses together, along with an additional course, frequently a first-year seminar course, where they are a self-contained group. In the “linked courses” model, students enroll in two or more courses with intentional modifications to the curriculum that highlight interdisciplinary connections. Unlike the “within course” model, the enrollment of these classes may be limited to those students in the learning community. In the “team-taught” LC, faculty members collaborate to develop and teach an interdisciplinary course with a shared syllabus.

Despite limited empirical research on the effectiveness of learning communities, as early as 1984, a National Institute of Education report urged that “every institution of higher education should strive to create learning communities, organized around specific intellectual themes or tasks” (p. 35). Twenty years later, the learning community model had been adopted at more
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than 500 U.S. colleges and universities (Smith et al., 2004).

**Learning Community Research**

The pedagogical literature, based predominantly on case studies of individual institutions, generally concludes that learning communities produce modest gains in retention and academic achievement (see Swaner & Brownell, 2008; Taylor, Moore, MacGregor, & Lindblad, 2003; Zhao & Kuh, 2004 for discussion), as well as a number of social outcomes, including identification and affiliation with the peer group and the institution, and feelings of acceptance by fellow students in the learning community (Astin, 1993; Tinto, Love, & Russo, 1993). Proponents claim that LC students are more actively engaged in the classroom (Tinto, Love, & Russo, 1993) and perceive a more supportive classroom environment (Dillon, 2003). Studies of community college students found those in learning communities were more likely to pass their courses (Bloom & Sommo, 2005; Tinto, 1997) and that LCs are particularly beneficial for at-risk students (Engstrom & Tinto, 2008).

Belonging to a learning community may have disproportionate benefits for some groups. Hotchkiss, Moore, and Pitts (2006) found that participation in LCs increased the GPA of black males at a large university by more than a full letter grade, more than any other demographic group. Black females, followed by white males, also saw disproportionate benefits when compared to students who were not enrolled in learning communities. White females, however, gained no advan-
tage in terms of GPA. The authors hypothesize that white women “are more successful in forming informal communities among their peers” (p. 204) and because they already have these social networks, experience no additional benefits in terms of GPA or retention from the structure of the learning community. The vast majority of learning communities are designed for first-year students, or are cohort programs for students who are all at the same place in a lock-step curriculum, as is common in schools of law and medicine. We found no studies that compared the effectiveness of learning communities limited to first-year students to those that contained students who varied by class standing.

Important questions remain about the impact of learning communities on academic outcomes. Some suggest that LC’s effects are probably indirect, and more related to enhanced student engagement than to direct instruction or curricular linkages (Pike, 2000). Recent studies have found that GPA and retention benefits are short-term, declining over time (Hotchkiss et al., 2006; Scrivener, Bloom, LeBlanc, Paxson, Rouse, & Sommo, 2008), and that the major impact on students is in the affective domain—related to attitudes, self-concepts, and satisfaction with college, rather than in the cognitive domain of knowledge and skills mastery (Reynolds & Hebert, 1998).

Little research has explored the effects of learning community programs on faculty (Taylor et al., 2003), and reports are primarily anecdotal. Like students, faculty are generally positive about their learning community experiences. However, it should be noted that because nearly all of the extant literature is written by learning community proponents, it is likely to reflect the
views of faculty who have had success with learning community models. A theme that emerges in these faculty comments is that LCs change the teaching experience from one of isolation to one of collaboration (Price, 2005; Tinto, 1998). By connecting faculty, whom Tinto (1998) notes have often never collaborated outside of committees, faculty members are “energized” to improve student learning (Price, 2005, p. 17).

Albers’ (2007) survey research with a small sample of faculty members at Buffalo State College found that collaboration with other faculty and learning more about first-year students were the most frequently cited benefits of teaching in LCs. Frustrations with students over lack of academic preparedness and behavioral issues, as well as “the need to focus on my discipline rather than the theme of the learning community” were the greatest concerns (Albers, 2007, p. 22). Sociologist David Jaffee (2004, 2007), a learning community instructor and coordinator at the University of North Florida, is among a small number of faculty who have pointed out unintended negative consequences of learning communities. He argues that while the students’ homogeneity in terms of age and academic inexperience provides a “social glue” for the community, it also “can produce mutually reinforcing attitudes and behaviors more appropriate for high school than for college” (Jaffee, 2004, p. B16). These behaviors are problematic in the classroom and are frustrating for instructors. Jaffee (2004) reported:

> Freshmen in a learning community have less opportunity to interact with older students, who tend to be more mature and often more academically serious. Thus, the communities designed to help students
through the transition to college life may inadvertently create conditions that potentially retard the students' academic development. (p. B16)

Additional challenges related to the internal dynamics of learning communities noted by faculty include an enhanced sense of group agency that can lead to an “us vs. them” mentality and conflict with instructors (Kussart, Hunt, & Simonds, 2004; Maher, 2004). Faculty also report problems with group-think (Jaffee, 2007; Maher, 2004; Sapon-Shevin & Chandler-Olcott, 2001) excessive socializing, and cliques or schisms in the group that undermine classroom climate (Jaffee, 2004, 2007). These faculty agree that specific training in classroom management techniques is needed to address the unique group dynamics of learning communities, particularly for new teaching assistants or for mature faculty used to a more hierarchical power relationship with students.

Research on the efficacy or appropriateness of LCs for particular disciplines or courses is scattered at best. Thus, while there is some data to indicate the overall impact of LCs, a critical gap in the literature is whether the LC is the most effective vehicle for teaching the distinct knowledge and competencies required by particular disciplines or majors.

**COMMUNICATION COURSES IN LEARNING COMMUNITIES**

The basic communication course is “an essential link” in many learning communities (Chesebro & Worley, 2000, p. 30) because it is interdisciplinary in nature
and often is a required general education course. This makes it a “convenient environment” for the introduction of new first-year student initiatives (Chesebro & Worley, 2000, p. 36). Worley and Worley (2006) note that oral communication courses are a natural fit for first-year experience programs, because they both emphasize fundamental academic skills such as listening, presenting, and small group interaction. Not surprisingly, content on communication skills is commonly found in textbooks used in first-year college seminar courses (Worley & Worley, 2006). Although the basic course may be intended to prepare first-year students for success in college courses, a national survey found that less than two percent of institutions report enrollment comprised of entirely first-year students (Morreale, Hugenberg, & Worley, 2006). Morreale et al. suggest that students may be “better served enrolling in the basic course later in their academic careers in order to be well prepared for the working world” (pp. 420-421) or by taking an advanced oral communication course closer to graduation.

Few empirical studies have examined the impact of offering a public speaking course in a learning community. Edwards and Walker (2007) found that public speaking students in learning communities had lower communication apprehension scores than students who were not in learning communities. However, this study involved a relatively small number of students (n = 70) and employed the Personal Report of Communication Apprehension (PRCA-24; Richmond & McCroskey, 1998), rather than the more reliable measure of public speaking anxiety, the Personal Report of Public Speaking Anxiety (PRPSA; McCroskey, 1970). It did not go
beyond subscale means to explore differences between the two groups on specific items related to public speaking. An earlier conference paper (Gorcyca, Leonard, Cronk, & Olesen, 1997) compared PRCA scores of 44 learning community students to non-learning community students and found that learning communities made no difference in decline in speaking anxiety. The authors concluded that taking the basic course in any setting will have a beneficial effect on communication anxiety. A similarly small study ($n = 44$) found that learning community students enrolled in the basic communication course reported no greater emotional or task support from peers than students in traditional sections (Larson, 1998).

Two studies (Baker, Meyer & Hunt, 2005; Kussart, Hunt, & Simonds, 2007) focused on learning community students’ use of collective power to influence their instructors in the introductory communication course, many of whom were graduate teaching assistants. The studies offer contradictory results. Baker et al. (2005) found that learning community students were no more likely to use negative persuasive tactics than students in traditional sections. Kussart et al. (2007) found that the group cohesiveness created by learning communities increased LC students’ willingness to use persuasive strategies of both a positive and negative nature with their instructors. In some cases, TAs felt intimidated by learning community students who “ganged up” on them (Kussart et al., 2007, p. 93), and these experiences resulted in negative attitudes toward the learning community concept.

As the learning community movement continues to grow—and on some campuses is mandated as the
teaching delivery model—it is important for disciplines, including communication, to examine the impact of LCs on their particular student outcome objectives.

This study investigates the effectiveness of the learning community as a delivery model for the Public Speaking course. Unlike a history or math course, the emphasis on public performance in a public speaking course would appear to make it especially well-suited for the LC delivery model that offers social support, homogeneity (first-year students only), and audience familiarity. Specifically, we assess the impact of learning communities on student outcomes in terms of speaking anxiety levels, course grades, and student and instructor perceptions of their own experiences.

SPEAKING ANXIETY

Reduction of speaking anxiety is a goal of many introductory public speaking courses. Approximately half a million college students give classroom speeches each year (Pearson, Child, & Kahl, 2006). Students enter the public speaking course feeling greater trepidation about the course than other courses (Richmond & McCroskey, 1998). While most students will experience some degree of speaking anxiety, one in five will experience communication anxiety of a serious nature (McCroskey, 1982b). This student anxiety has a range of consequences, from poor performance in the class to withdrawal from the class to avoidance of future college classes and careers that require oral presentations.

The theoretical foundation for the study is based in the research examining audience effects on speaker...
anxiety. In most people, speaking anxiety is considered to be a temporary state that is triggered by situational factors, including perceptions of the speaking environment and the audience that may fluctuate in intensity as a speech progresses. While more permanent trait anxiety and other causes of anxiety certainly exist, audience variables of familiarity to the speaker, pleasantness and status have received the greatest attention in empirical studies. A supportive classroom environment and a familiar, friendly audience have been consistently correlated with decreases in public speaking anxiety and increases in speaker confidence (Buss, 1980; Beatty, 1988; Harris, Sawyer, & Behnke, 2006; MacIntyre & MacDonald, 1998; McCroskey, 1984; Seta, Wang, Crisson, & Seta, 1989). In experimental research, students reported less anxiety and exhibited a willingness to speak longer when speaking to friends as opposed to strangers (MacIntyre & Thivierge, 1995). Unfamiliar audiences, including “virtual” audiences of realistically-animated characters, have been found to provoke speaking anxiety (Pertaub, Slater, & Barker, 2002). Particularly among highly anxious speakers, when an audience is perceived as congenial, levels of anxiety tend to decrease as a speech progresses (MacIntyre & McDonald, 1998). Conversely, Ayres (1986) found that if a speaker doubts she/he can meet the audience’s expectations, speaking anxiety will occur. Physiological studies have found that heart rate and other cardiovascular indicators of stress are higher in students who thought they were speaking to an audience of experts rather than peers (Hilmert, Christenfeld, & Kulik, 2002). Anecdotal observations from public speaking instructors suggest that anxiety-producing speaking expe-
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Experiences may encourage student bonding, particularly when the instructor has modeled a tone of supportiveness (Weber, 2004).

Women consistently report more anxiety in public speaking contexts than males (Behnke & Sawyer, 2000; McCroskey, Simpson & Richmond, 1982; Vevea, Pearson, Child, & Semlak, 2009), although communication anxiety as a persistent trait is not significantly correlated with gender, age, or year in college (Dwyer & Fus, 1999). Although women report greater levels of fear in the public speaking classroom, they actually perform better than males and receive higher grades than males on classroom speeches (Pearson, 1985). Inexperience may also be related to contextual speaking anxiety. Rubin, Graham, and Mignerey (1990) found that college students became better communicators as they advanced toward graduation.

By contrast, there is little evidence to suggest situations in which an audience of friends may provoke more anxiety than an audience of strangers. Two studies have found that when an individual must perform a potentially embarrassing activity, a familiar audience of friends can actually elicit more anxiety than an audience of strangers (Brown & Garling, 1977; Froming, Corley, & Rinker, 1990). These findings have not been adequately explored in a public speaking context.

In summary, the literature from both the learning community and the public speaking fields suggests that the social benefits of learning communities could have a positive impact on public speaking student outcomes. This study compares students taking public speaking in learning communities with those in traditional, stand-alone sections to determine if in fact learning commu-
ties offer a superior delivery model for the public speaking course. The following research questions were posed:

RQ1: Does taking public speaking in a learning community reduce speaking anxiety to a greater degree than taking public speaking in a traditional public speaking class?

RQ2: Does taking public speaking in a learning community rather than a traditional section have any impact on student grades?

RQ3: Do students perceive learning communities to provide a superior environment for the public speaking course compared to traditional sections?

RQ4: Do faculty perceive learning communities to provide a superior environment for the public speaking course compared to traditional sections?

**METHOD**

**Setting**

Located in the suburbs of Atlanta, Georgia, Kennesaw State University enrolls approximately 22,000 undergraduate and graduate students. Enrollment in a learning community or in the first-year seminar course is required for all first-year students. In a typical fall semester, as many as 54 learning communities, serving 1350 students, are offered. Learning communities commonly include three general education courses, which are integrated with a theme that highlights interdisci-
plenary connections across courses. These LCs would be classified in the Smith et al. (2004) model noted previously as linked courses LCs. Public speaking has been offered in learning communities with themes ranging from leadership to career exploration to contemporary gender issues, as well as in learning communities for specific intended majors, such as pre-pharmacy and business.

Participants

Subjects \( (n = 236) \) were students enrolled in sections of the introductory Public Speaking course. Half of the students \( (n = 119) \) were enrolled in eight sections of public speaking offered in learning communities (LCs). These students took two to three courses together as a cohort, including public speaking. These students not only attended several classes together, often walking to class together, but also shared in common the fact that they were all first-year students, most of whom lived on campus in the same residential area. Because of these commonalities, the LC students would be expected to develop considerable familiarity with each other over the duration of the semester. The other half of the students \( (n = 117) \) were enrolled in eight stand-alone (SA) sections of public speaking. These sections included sophomores, juniors, and some seniors, as well as first-year students. Seven different faculty members taught the courses. All of the sections participating in the study were taught by full-time or part-time faculty, as opposed to graduate teaching assistants (who often teach introductory public speaking courses at large universities).
All sections were of equivalent size (maximum of 23 students), and used the same textbook.

In addition, interviews were conducted with three faculty members at the institution who had taught the course both as a stand-alone course and in the learning community format at least once. While additional faculty taught sections of public speaking whose students were included in the study, the interviews were limited to faculty other than the authors who had taught in both learning conditions and could compare their experiences.

**Procedures**

Four forms of inquiry were employed: the Personal Report of Public Speaking Anxiety (PRPSA; McCroskey, 1970); an analysis of course grades, an attitudinal student survey, and qualitative interviews with instructors. The study used a matched pre-test/post-test design, a methodology associated with high internal validity (Campbell & Stanley, 1963). At the beginning of the semester, students in both learning conditions were given a highly-reliable (alpha reliability >.90), nationally-normed inventory of speaking anxiety, the Personal Report of Public Speaking Anxiety (PRPSA; McCroskey, 1970) to establish a baseline speaking anxiety score. The PRPSA (see Appendix A) was chosen over the more broadly-focused Personal Report of Communication Apprehension (PRCA-24) because it is a more reliable measure of speaking anxiety (McCroskey, 1982a). At the end of the same semester, students took the PRPSA again to determine whether their course experience had influenced their level of speaking anxiety, as reflected
by changes in their PRPSA scores. Students also completed a brief survey at the end of the semester to provide more detail about their perceptions of the classroom climate and audience supportiveness in their public speaking class (see Appendix B). An analysis of student grades by learning condition, gender, and class standing was also conducted.

Finally, qualitative interviews with instructors were conducted to provide a more holistic view of the learning community environments. As noted previously, three of the seven faculty members who taught sections included in the study were selected for interviews, because these faculty members had experience teaching in both LC and SA environments. Interviews were conducted by the authors using the same list of seven questions for each faculty member. Questions related to perceived differences in the classroom environment, differences in performance level of the students, differences in teaching strategies in SA and LC sections, advantages and disadvantages to LCs for students and instructors, and preferences for either environment. Responses were recorded and analyzed for areas of consensus and of disagreement.

PRPSA, student survey, student demographic, and grade data were entered into SPSS for data analysis. Descriptive statistics were used to describe student responses and outcomes. To examine the effect of learning condition on pre-test PRPSA responses, a two-step procedure was used. First, because the PRPSA instrument employs multiple items per construct, a principal components factor analysis was used to reduce the number of variables from the 34-item PRPSA inventory into groupings of related factors. Multivariate analysis of
variance (MANOVA) was employed to assess the effect of learning condition on students’ speaking anxiety, grades and perceptions. Possible interaction effects of gender and class standing were also examined. These statistical procedures were performed to compare all students in LCs with all students in SAs. Additionally, the data was sorted to compare first-year students only. Equality of variance in significance testing was not assumed, because the two groups of students were not randomly assigned into test conditions, but rather self-selected a learning community or stand-alone section of public speaking through regular university registration procedures.

**RESULTS**

Demographic differences were found among students in learning communities \( (n = 119) \) and stand-alone sections \( (n = 117) \). SA sections contained a larger proportion of male students \( (37\%) \) than LC sections \( (22\%) \). SA sections also contained sophomores, juniors, and seniors; while LC sections were limited to first-year students \( (n = 119) \). Stand-alone sections enrolled a smaller proportion of freshmen \( (36.8\%) \), and included sophomores \( (41.9\%) \), juniors \( (18.8\%) \), and seniors \( (2.6\%) \).

The study posed the overall question, “Do learning communities offer a superior delivery model for the public speaking course?” The analysis that follows indicates that the answer is no. On the basis of reduction in speaking anxiety and student performance as reflected in grades, students in learning communities did not have superior outcomes to those in stand-alone sections.
Baseline Comparisons of Public Speaking Anxiety

A comparison of pre-test PRPSA scores revealed that students enrolled in learning communities entered the public speaking course with greater speaking anxiety than students enrolled in stand-alone sections, with an average PRPSA score of 113 (moderately high) vs. 101 (moderate). This difference was statistically significant \[ t(234) = 4.157, \ p < .001 \]. The effect size of this difference is measured by a Cohen’s \( d \) value of .54. This is considered a medium effect; the mean PRPSA pre-test score in the LC group would be about at the same level as the 70th percentile score in the SA group.

A principal components factor analysis was used to reduce the number of variables. During the initial stage of this analysis, the Kaiser Meyer-Olkin (KMO) measure and Bartlett’s test of sphericity were computed. The KMO measure obtained a value of .93. Bartlett’s test of sphericity was significant \( \chi^2(561) = 4193, \ p < .001 \). Both results provide evidence that the correlation matrix was amenable to factoring. In determining the number of factors to be extracted, scree plot analysis and interpretability of factors were considered. A four-factor solution accounted for 53.7% of the variance in the dataset. An equamax rotation was employed. The cutoff criterion between meaningful and trivial factor loadings was .40. Twenty-seven of the 34 variables had clearly high loadings on only one factor. Six of the variables resulted in moderate loadings on two factors. Only one variable, “I feel anxious while waiting to give a speech” failed to obtain a substantial loading on any of the four factors. This indicates that the factor analysis with its four-fac-
tor solution succeeded in achieving a simple structure to explain the data.

The four factors identified were interpreted as follows. The first factor was labeled pre-speech anxiety. This factor was associated with high loadings on items such as, “While preparing for giving a speech, I feel tense and nervous.” The second factor was labeled performance anxiety during the speech. It was associated with high loadings on items such as, “My thoughts become confused and jumbled when I am giving a speech.” The third factor was labeled physiological symptoms experienced during the speech. It was associated with high loadings on items such as, “My hands tremble when I am giving a speech.” Finally, the fourth factor was labeled imminent speech anxiety. It was associated with high loadings on items dealing with feelings experienced just before the speech is to be given, such as, “I feel comfortable an hour before giving a speech.”

Variables were created for each of the four factors represented in the PRPSA. There were significant differences relating to the factors pre-speech anxiety \[t(234) = -2.514, p < .02\] and imminent speech anxiety \[t(234) = -2.674, p < .001\]. Students in the LC sections of the course reported significantly higher anxiety during the preparation phase and just before the presentation of a speech than those in the SA sections. Differences in the other two factors were not significant.

**Post-test Results**

A repeated measures MANOVA was conducted to determine the effect of learning condition, gender and class standing on the dependent variables associated
with the first three research questions. These were the difference in PRPSA pre-test and post-test scores, course grade, and student perceptions as measured by five survey questions. MANOVA results indicate that learning condition significantly affects the combined dependent variable (Wilks’ $\lambda = .820$, $F(7, 220) = 6.884$, $p<.001$). This was the only main effect found to be significant. No interaction effects were significant. To identify the variables responsible for the significant MANOVA results for learning condition, univariate ANOVA was run as a post-hoc test. The ANOVA results reveal that only the responses on two student perception questions differ significantly by learning condition. These were the question of whether students considered their classmates friends [$F(1, 226) = 5.638$, $p<.05$] and the question of whether in hindsight the student would enroll in an LC or an SA public speaking course [$F(1, 226) = 41.691$, $p<.001$]. Students enrolled in LC courses were found to be significantly more likely to consider their classmates friends and to say they would enroll in an LC course again. In short, the MANOVA and post-hoc ANOVA results indicate that learning condition does not create differential course outcomes related to speaking anxiety or grades for students in learning communities.

Research question one asked, “Does taking public speaking in a learning community reduce speaking anxiety to a greater degree than taking public speaking in a traditional public speaking class?” The data reveal that learning communities are no more effective at reducing speaking anxiety than traditional classroom formats. At the end of the semester, intra-group analysis of PRPSA post-test scores showed that students in both
learning conditions reduced their speaking anxiety by similar levels. The mean PRPSA score for students in learning communities dropped to 100.5 (moderate), a difference of more than 12 points, while the students in the stand-alone sections reduced their speaking anxiety by an average of 11 points, to 90 (moderately low). As noted previously, the MANOVA and post-hoc ANOVA analysis did not find this to be a significant difference.

**Gender and Class Standing**

Because stand-alone sections were populated by more males and more upperclassmen than learning communities, data analysis was used to determine whether gender and class standing could be confounding variables accounting for differences between students in learning communities and stand-alone sections. Males’ PRPSA scores showed higher baseline confidence at the outset of the course than females. Males’ average PRPSA pre-test score was 98 (moderate), vs. 111 (moderately high) for females. This difference was statistically significant ($p < .001$). By semester’s end, males’ post-test PRPSA score had dropped by 11 points, to 87 (moderately low), while females’ post-test scores dropped 12 points, to 99 (moderate). As previously stated, the MANOVA showed that gender made no difference in the degree of anxiety decline over the course of the semester. Another dependent variable in the MANOVA was course grade. Male students’ higher levels of speaking confidence did not translate into higher course grades. No significant difference was found between the average course grades of males and females.
Speaking anxiety going into the course was correlated with class standing. The ANOVA procedure revealed significant differences \[F(3, 232) = 3.627, p < .05\] between the pre-test scores of freshmen, sophomores, juniors, and seniors, with freshmen scoring the highest average PRPSA anxiety scores \((M = 110)\), followed by sophomores \((M = 102)\), juniors \((M = 100)\), and seniors \((M = 82)\). Post hoc analysis using Fisher’s LSD test showed that the only significant differences were between freshmen and the other three groups, with freshman showing the greatest anxiety.

All students reduced their anxiety levels by the end of the semester. Freshmen showed significant improvement between pre-test and post-test scores, dropping an average of 18 points on the PRPSA, from an average score of 110 to 92 \((p < .001)\). Sophomores significantly lowered their anxiety score from 102 to 88, a drop of 14 points \((p < .001)\). Juniors lowered their anxiety score from 100 to 93, a drop of 7 points that was not found to be statistically significant. The sample size of seniors was too small for meaningful analysis. However, as previously noted, the MANOVA showed no significant main or interaction effect involving class standing.

**First-Year Student Outcomes**

Because the baseline anxiety experienced by freshmen was found to differ significantly from other students’, data was sorted to compare first-year students in learning communities to first-year students in stand-alone sections. Of these students, 118 were female and 44 were male. One hundred nineteen first-year students took the course in learning communities, and 43 took it
in stand-alone sections. Among first-year students, those in learning communities had higher baseline anxiety scores ($M = 113$), compared to those in stand-alone sections ($M = 101$). One-way analysis of variance found this difference to be statistically significant [$F(1, 160) = 8.069, p < .005$]. By the end of the course, LC freshmen reduced their mean PRPSA score by 13 points, to 100. SA freshmen lowered their mean score to 90, a decline of 11 points. Both of these reductions were found to be significant ($p < .005$). A MANOVA was run using the difference in pre-test and post-test PRPSA scores for the first-year students as one of the dependent variables. There was no significant difference in the anxiety reductions made by the LC and SA groups.

An individual item analysis corroborates the above results. The ANOVA procedure showed significant differences in the pre-test responses between LC and SA freshmen on nine of 32 PRPSA items (PRPSA question numbers 2, 6, 8, 9, 12, 18, 27, 30, and 31). In all cases, learning community students reported more anxiety than stand-alone section students. These items were related to feelings of dread, fear, tenseness, nervousness, and difficulty sleeping when anticipating a speech. There were no significant differences between items related to anxiety during or after a speech.

On the post-test, ten items reflected significant differences between first-year student groups (PRPSA question numbers 2, 5, 12, 17, 18, 26, 27, 28, 29, and 31). For all items, the LC freshmen continued to report greater anxiety than SA freshmen. For most PRPSA items, both groups' anxiety showed a decline from the pre-test, but SA students' anxiety showed a slightly greater decline. For example, on the items that showed
significantly different responses on both the pre-test and post-test, LC students reduced their anxiety by an average of .3 points on a five-point scale. SA students reduced their anxiety by .4 points on a five-point scale. However, these differences in the degree of decline of anxiety were not statistically significant.

Course Grade Analysis

Research question two asked, “Does taking public speaking in a learning community rather than a traditional section have any impact on student grades? Learning communities do not appear to impact student grades. Although the average GPA of students in learning communities was slightly lower than students taking the course in a stand-alone section (3.05 for LC students vs. 3.10 for stand-alone section students), this difference was not statistically significant. Higher anxiety among LC freshmen did not translate to lower grades: Grades of LC freshmen were not statistically different from grades of SA freshmen, which averaged 3.0 in both learning conditions.

Student Perceptions of Learning Communities

Research question four asked, “Do students perceive learning communities to provide a superior environment for the public speaking course?” Responses to the attitudinal survey given at the end of the semester to supplement the PRPSA revealed that students perceived the learning community environment to be preferable to the stand-alone class. Pearson chi-square analysis found statistically significant differences $[\chi^2 (2) = 82.954, p <$
.001] in response to the item, “In hindsight, if I had the ability to take Public Speaking over again, I would prefer to take Public Speaking in a) a learning community, b) a stand-alone course, or c) it would make no difference.” By a large margin, LC students preferred the learning community format (81%), and none said they would prefer a stand-alone section, although 19% said it made no difference. By comparison, just 14% of stand-alone section students said they preferred the stand-alone sections. Twenty-two percent said that if they could do it again, they would choose a learning community instead, while most students, 63%, said it made no difference.

LC students were more likely to consider fellow students in the class “friends” (LC: $M = 1.7$, $SD = .69$ vs. SA: $M = 2.1$, $SD = .93$). This difference was significant $[t(233) = -3.73, p < .001]$. An interesting finding, however, was that students in LCs were also more likely to indicate that the audience was a source of their anxiety (LC: $M = 3.2$, $SD = 1.30$ vs. SA: $M = 3.5$, $SD = 1.24$). This difference was also significant $[t(233) = -2.26, p < .05]$. There were no significant differences in students’ perceptions of a supportive classroom environment or in students’ ratings of their “overall comfort level at the end of the semester in presenting a speech to the students in my class.”

An analysis of the survey responses isolating only first-year students found similar results. Learning community freshmen were significantly more likely to prefer a learning community format if given the hypothetical opportunity to take the course again $[\chi^2(2) = 52.835, p < .001]$. In fact, 81% of LC freshmen preferred to take the course again in a learning community; zero
said they would prefer to take it as a stand-alone section, and the rest indicated it made no difference to them. By contrast, 21% of stand-alone freshmen said they would prefer to take the course in a learning community, 12% preferred a stand-alone section, and the largest portion, 65%, said it made no difference.

LC freshmen were also more likely than SA freshmen to consider fellow students in the class “friends” (LC: $M = 1.7$, $SD = .69$ vs. SA: $M = 2.0$, $SD = 1.01$). This difference was significant [$t(159) = -2.36$, $p < .05$]. There were no significant differences between first-year student groups on other survey items.

**Faculty Perceptions of Learning Community Efficacy**

Research question four asked, “Do faculty perceive learning communities to provide a superior environment for the public speaking course compared to traditional sections?” Interviews with a small group of faculty members experienced in teaching the public speaking course in both LC and SA conditions offer anecdotal insights into faculty viewpoints. While not generalizable, these results contribute to a more holistic picture of the LC experience. The instructors provided no consistent agreement as to whether the LC condition reduced observed speaking anxiety or enhanced speaking performance. All of the instructors perceived that the classroom environment was more cohesive in LCs than in SAs, noting that students seemed to bond more quickly, talk with each other before and after class about non-class related topics, and exhibit a high level of supportiveness for each other in the act of public speaking. This was
viewed as a strength of LCs. One instructor felt he facilitated “community” by using the first five minutes of class time to “check in” with LC students to see what was on their minds, that may or may not be related to the public speaking course.

Consistent with the literature previously reported, two instructors noted that a downside to peer familiarity is “13th grade behaviors” that weren’t observed in SA sections and can lead to classroom behavior management issues. “I have to ‘teach’ the LC students how to be respectful audience members if they are acting less mature than other students,” noted a faculty member, who sends e-mails to disruptive students.

From a pedagogical standpoint, the faculty members reported they do not typically alter content and instruction style in either condition, with the exception of some prep work to vary lecture examples and speech topics to support the LC theme and encourage interdisciplinary connections. Faculty members noted that they may have to exert more effort to coordinate with linked instructors. On the positive side, one faculty member noted that the LC allows for creativity and collegiality with instructors outside one’s own discipline. On the negative side, faculty also noted that cross-disciplinary collaborations were difficult to cultivate when LC instructors from other disciplines failed to interact with their linked colleagues. As is apparent in this situation, several times in interviews we noted that faculty members used phrases that suggest they recognize a discrepancy between “ideal” LC practices and “actual” instructional practices. For example, one noted, “If we do it right” (emphasis added) “the LC shows students how to think across disciplines.” Similarly, we heard, “If it is done
right,” (emphasis added) “there shouldn’t be a difference in instruction except a deliberate connection to the other courses.” The onus for ensuring that learning communities are “done right” is largely left to individual faculty members, who may not have the control, where faculty peers are concerned, or knowledge of best practices to ensure that the learning community lives up to its potential. Only one faculty member had a clear preference for teaching in LCs or SAs, and preferred SAs because they were “less work—I don’t have to coordinate with others.” Other instructors were amenable to teaching in either learning condition.

**DISCUSSION**

This study fills a critical gap in the literature about the impact of learning communities on the communication discipline, and adds insight to our knowledge of pedagogical approaches to reducing speaking anxiety. It finds that the learning community model does not appear to offer significant advantages in terms of course outcomes for public speaking students. Rather, it suggests that first-year learning communities attract students with greater speaking anxiety, and put them in a classroom environment where they do not have exposure to more mature and confident classmates. In addition, the study challenges commonly held assumptions about speaking anxiety and audience familiarity and friendliness. It confirms that taking public speaking in a learning community does not reduce speaking anxiety any more than taking public speaking in a traditional classroom, and has no impact on student grades.
Rather, enrollment in a learning community is associated with higher average PRPSA anxiety scores both going into the course and coming out of the course. Although more students in learning communities considered their classmates to be friends than students in stand-alone sections did, this did not reduce LC students’ speaking anxiety or create a perception of a more supportive speaking environment than that experienced by SA students. While faculty perceived more peer support in their LC classes, none of them observed noticeable differences in student anxiety or course outcomes.

The findings contradict previous research that correlates audience familiarity and friendliness with reduced speaking anxiety, suggesting a limit to this relationship. As Brown & Garling (1977) and Froming et al. (1990) have noted, making mistakes in front of friends or respected peers can be more anxiety-producing than embarrassing oneself in front of strangers or mere acquaintances. This phenomenon is well known by every college professor who has felt more anxiety presenting scholarship in front of colleagues from his or her own institutions than to unknown conference participants. MacIntyre & Thivierge (1995) explained the following:

... friends may tease the speaker immediately following a speech, are better able to associate the present with a past faux pas and in the future can remind the speaker of an embarrassing action. If performing a speaking task clashes with the wish to maintain a positive image with one’s friends, then anxiety seems likely to arise. (p. 454)

An interesting finding of this study is that student perceptions of learning communities were quite divergent from the reality of actual student outcomes.
Whether students had taken public speaking in a learning community or in a stand-alone section, they perceived learning communities to be the superior environment for the public speaking course. This phenomenon was reflected in a “brand loyalty” among learning community students. Despite higher levels of speaking anxiety, LC students expressed a greater degree of comfort in the learning community structure. More than 80% of learning community students said that they would choose a learning community again for their public speaking course. Only 14% of stand-alone students said they would choose a stand-alone section, with 22% saying they would prefer to take the course in a learning community. This preference may be based on fear of the unknown—LC students may assume that instructors of stand-alone sections do not take steps to create a supportive classroom environment, when in fact, many of them make great efforts to do so.

Gender and class standing may be better predictors of speaking anxiety than classroom environment. Male students’ PRPSA scores reflected greater confidence going into the course, and showed greater declines in speaking anxiety than females by the end of the course. This is consistent with previous research that has shown that women report more speaking anxiety than males (Behnke & Sawyer, 2000). We note that at 18 or 19 years old, girls may be particularly self-conscious about displaying gender-appropriate ideals of appearance and “feminine” behavior, which may contribute to their anxiety when presenting in front of peers.

The study provides evidence of an inverse relationship between class standing and speaking anxiety. PRPSA scores reveal that the higher the student’s class,
the lower the speaking anxiety. This finding is consistent with previous scholarship that found that college students became better communicators as they advanced toward graduation (Rubin et al., 1990). First-year students, many without any significant speaking experience, would be expected to report speaking anxiety. These findings lead us to question the wisdom of isolating freshmen together in learning communities. First-year students in stand-alone sections may benefit from exposure to more confident upperclassmen and model their performance after these students. They may also gain confidence from seeing that they can “hold their own” with older students in an environment that is not “13th grade.”

The significant differences between first-year groups also suggest that there may be something about the type of student who chooses a learning community that is correlated with higher speaking anxiety. Learning community students came into the course with a significantly higher level of anxiety, which although reduced by the end of the term, was still slightly higher than that of students who chose stand-alone sections. This was true even when first-year students were isolated for analysis. Thus the differences are not simply explainable by the first-year status of all LC students. The learning community model may attract students who lack confidence, and consciously or subconsciously seek more social support. This is consistent with previous scholarship that found that less-prepared students and those who feel alienated by a large campus are more likely to be attracted to the LC model (Hotchkiss, Moore, & Pitts, 2006). The higher speaking anxiety of LC students may be an artifact associated with self-se-
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LIMITATIONS

A limitation of real-world classroom studies is that students are not randomly assigned to treatment conditions as they would be in a classic experimental design, but rather choose the LC or SA condition of their own volition through the regular registration process. Thus, while this study identifies statistically significant associations between learning condition and student outcomes, causation cannot be assumed. Instructor effects could not be isolated because not every instructor could be assigned to both learning conditions. In addition, statistical significance of differences in grades based on class standing could not be determined because small cell sizes resulting from very few Ds and Fs and few uperclassmen would not allow these to be included as factors in the model.

FUTURE RESEARCH

Future research might establish a psychological and academic profile of students who choose learning community formats over stand-alone sections, and confirm whether lack of confidence in speaking or other academic abilities is a trait of these students. While the present study found no difference in course outcomes for a general student population, further research is needed to determine if LCs might be particularly beneficial for...
academically at-risk students or highly anxious students taking public speaking. The current findings also point to the need for more research on audience effects and speaking anxiety, to identify classroom conditions in which familiar audiences of peers actually increase, rather than decrease speaking anxiety.

Future scholarship might also consider the construct of affective learning, which focuses on the development of positive attitudes toward the subject or the teacher (Bloom, 1956). Measurements of affective learning might encompass, for example, the value that students place on learning public speaking skills, how important they believe the public speaking class is in the college curriculum, or how important they believe communication skills will be in their future careers. Affective learning is thought to facilitate cognitive learning and motivation (Rodriguez, Plax & Kearney, 1996). The Affective Learning Scale (Andersen, 1979) and its subscales related to attitude toward course content and course instructor might yield more information about the interplay between the affective and cognitive domains in the learning community format. Because affective learning is correlated with motivation to learn and to use what is learned after the student leaves the classroom (Chory & McCroskey, 1999), demonstrating a connection between learning communities and affective learning would add an important dimension to our knowledge of the benefits of learning communities.

Finally, the interview results presented here and the limited empirical literature on faculty perspectives suggest the need for more robust studies of faculty experience in teaching in learning communities, and studies
that include a large sample size of faculty randomly selected from those who have and have not taught in LCs.

**Implications for Communication Educators**

For communication department chairs operating in an era of limited resources, “Knowing more about the true impact of programs like [learning communities] allows college administrators to make more informed decisions regarding the amount of resources to devote to them” (Hotchkiss et al., 2006, p. 207). This study suggests that communication departments should proceed cautiously with the learning community pedagogy. While the freshman learning community may benefit the institution as a whole with modest gains in retention, it does not appear to offer measurable advantages to public speaking students. On the contrary, it may isolate students with the weakest public speaking confidence levels and provide no opportunities for exposure to upperclassmen who can model appropriate college-level performance standards and classroom behavior.

College administrators and basic course coordinators should also weigh the role of instructor training in their decision-making. Is specific training available or required for faculty who teach in LCs that goes beyond content-based curriculum to emphasize the challenges and opportunities presented by the cohesive group dynamics of learning communities? Does such training encompass the teaching styles best suited to the power dynamics of LCs, or classroom management strategies? Do existing new faculty orientation or graduate teaching assistant training programs currently address the unique qualities of learning communities? Are there
structural mechanisms in place to ensure that collaboration between faculty members is sustained throughout the semester, or to address problems that may emerge? Clearly, faculty assigned to teach in LCs should be made aware of the population factors that influence the LC environment. Instructors may have to intensify their efforts to set a tone of enthusiasm, warmth, and rapport with students, while setting particularly clear expectations for college-level performance and behavior. Public speaking instructors, in particular, should also anticipate that the high audience familiarity of learning communities may potentially lead to greater fear of embarrassment, exacerbating speaking anxiety. Basic course instructors who are experienced in teaching in learning communities can offer much to further the dialogue about learning community pedagogy and best practices.

Finally, do the benefits of association with a campus-wide learning community program outweigh the limited impact that the LC structure may have on basic communication course students? Chesebro & Worley (2000) note that there are positive and negative consequences to participation in learning community programs. The communication department may benefit if it is associated with positive first-year student outcomes, positioning it as central to the goals of the institution and worthy of continued support. However, it may also be perceived by other disciplines or learning community organizers as a “content-free” skills course, or as a “service” course rather than a serious academic discipline (Chesebro & Worley, 2000, p. 31).

Tinto and Goodsell-Love (1993) caution, “Many see [the learning community] as a cure-all for a host of
problems ranging from poor student involvement in learning to low rates of student persistence. But like many new trends, proponents’ claims about the effectiveness of collaborative learning tend to run ahead of empirical evidence of program impact” (p. 16). Assuming that academic departments are given a choice by their institutions, the empirical evidence shows no reason for communication departments to rush to jump on the learning community bandwagon, and in fact, offers arguments for resisting this model for the public speaking class.

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APPENDIX A

PERSONAL REPORT OF PUBLIC SPEAKING ANXIETY (PRPSA)

Instructions: Below are 34 statements that people sometimes make about themselves. Please indicate whether or not you believe each statement applies to you by marking whether you:

(1) Strongly Agree (2) Agree (3) undecided (4) Disagree (5) Strongly disagree

_____ 1. While preparing to give a speech, I feel tense and nervous.
_____ 2. I feel tense when I see the words speech and public speaking on a course outline.
_____ 3. My thoughts become confused and jumbled when I am giving a speech.
_____ 4. Right after giving a speech, I feel that I have had a pleasant experience.
_____ 5. I get anxious when I think about an upcoming speech.
_____ 6. I have no fear of giving a speech.
_____ 7. Although I am nervous just before giving a speech, I soon settle down after starting and feel calm and comfortable.
_____ 8. I look forward to giving a speech.
_____ 9. When the instructor announces a speaking assignment in class, I can feel myself getting tense.
_____ 10. My hands tremble when I am giving a speech.
_____ 11. I feel relaxed while giving a speech.
_____ 12. I enjoy preparing for a speech.
13. I am in constant fear of forgetting what I prepared to say.
14. I get anxious if someone asks me something about my topic that I do not know.
15. I face the prospect of giving a speech with confidence.
16. I feel that I am in complete possession of myself while giving a speech.
17. My mind is clear while giving a speech.
18. I do not dread giving a speech.
19. I perspire just before starting a speech.
20. My heart beats very fast just as I start a speech.
21. I experience considerable anxiety while sitting in the room just before my speech starts.
22. Certain parts of my body feel very tense and rigid while I'm giving a speech.
23. Realizing that only a little time remains in a speech makes me very tense and anxious.
24. While giving a speech, I can control my feelings of tension and stress.
25. I breathe faster just before starting a speech.
26. I feel comfortable and relaxed in the hour or so just before giving a speech.
27. I do poorly giving speeches because I am anxious.
28. I feel anxious when the teacher announces the date of a speaking assignment.
29. When I make a mistake while giving a speech, I find it hard to concentrate on the parts that follow.
30. During an important speech, I experience a feeling of helplessness building up inside me.
31. I have trouble falling asleep the night before a speech.
32. My heart beats very fast while I'm presenting a speech.
33. I feel anxious while waiting to give my speech.
34. While giving a speech, I get so nervous that I forget facts I know.

To determine your score on the PRPSA, complete the following steps:

1. Add the scores for items 1-3, 5, 9, 10, 13, 14, 19-23, 25, 27-34.
2. Add the scores for items 4, 6-8, 11, 12, 15-18, 24, and 26.
3. Complete the following formula:

   \[ \text{PRPSA} = 132 - (\text{total from step 1}) + (\text{total from step 2}) \]

Your score should range between 34 and 170. If your score is below 34 or above 170, you have made a mistake in computing it.

<table>
<thead>
<tr>
<th>Score</th>
<th>Anxiety about Public Speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-84</td>
<td>Low (5% of people)</td>
</tr>
<tr>
<td>85-92</td>
<td>Moderately low (5%)</td>
</tr>
<tr>
<td>93-110</td>
<td>Moderate (20%)</td>
</tr>
<tr>
<td>111-119</td>
<td>Moderately high (30%)</td>
</tr>
<tr>
<td>120-170</td>
<td>Very high (40%)</td>
</tr>
</tbody>
</table>

Most people score in the moderate to high categories.

Note: Complete one of these forms at the beginning of the semester and one after your final speech. Compare your total scores as well as your responses to individual items.

APPENDIX B

END-OF-COURSE SURVEY

Please rate your level of agreement with each of the following statements.

1. The audience in this class was a source of anxiety when I presented a speech.
   a. strongly agree
   b. somewhat agree
   c. neutral
   d. somewhat disagree
   e. strongly disagree

2. I would consider my fellow students in this class “friends.”
   a. strongly agree
   b. somewhat agree
   c. neutral
   d. somewhat disagree
   e. strongly disagree

3. The audience in this class provided a supportive environment for learning to speak in public.
   a. strongly agree
   b. somewhat agree
   c. neutral
   d. somewhat disagree
   e. strongly disagree

4. On a scale of 1-5, I would rate my overall comfort level at the end of the semester in presenting a speech to the students in my class as:
   a. 5: extremely comfortable presenting to these class members
   b. 4: very comfortable presenting to these class members

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c. 3: moderately comfortable presenting to these class members
d. 2: not very comfortable presenting to these class members
e. 1: extremely uncomfortable presenting to these class members

5. In hindsight, if I had the ability to take Public Speaking over again, I would prefer to:
   a. take Public Speaking in a learning community (with students I attend several classes with as a group)
   b. take Public Speaking as a stand-alone course, not in a learning community
   c. It would make no difference to me.

Thank you for your participation!