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Melissa A. Broeckelman-Post  
*George Mason University*

Brenda L. MacArthur  
*George Mason University*

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## Research Article

# The Impact of Public Speaking and Hybrid Introductory Communication Courses on Student Perceptions of Homophily and Classroom Climate

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Melissa A. Broeckelman-Post, George Mason University

Brenda L. MacArthur, George Mason University

### Abstract

*This study examines whether public speaking and hybrid introductory communication courses contribute to whether students feel connected to one another as a result of taking the course. Results indicate that students develop stronger perceptions of homophily and connected classroom climate over time, and this growth is slightly larger in public speaking courses than in hybrid introductory communication courses. Attendance impacted the levels of perceived homophily and connected classroom climate at the end of the course. However, perceived homophily did not predict academic performance in either course, and perceptions of classroom connectedness only predicted the academic performance of students in the hybrid introduction to communication course.*

*Keywords: connected classroom climate, homophily, basic communication course, student performance, student attendance*

The ability to communicate effectively is one of the most valued skills for college graduates (Hart Research Associates, 2015), and nearly 80% of surveyed colleges and universities now require that all students take an oral communication course as part of general education, an increase from previous surveys of the basic communication course (Morreale, Myers, Backlund, & Simonds, 2015). Though there is a great deal of variability across institutions, there are two primary formats for the general education oral communication course; as of 2015, 60.8% of colleges and universities taught public speaking, and 27.0% taught a hybrid introductory course that included interpersonal, group, and public speaking skills as their general education course (Morreale, Myers, Backlund, & Simonds, 2015), but little research has been conducted to compare the effectiveness of these two most popular course formats in meeting course and institutional outcomes.

While the development of communication skills is the primary goal of both types of courses, most universities also have additional student development goals for the course, particularly when the course is intended for first-year students or is part of a robust First Year Experience curriculum. For example, conversations at the Basic Course Directors' Conference indicate that many universities use the introductory communication course as a vehicle for educating students about campus student support resources (e.g., tutoring services, writing centers, libraries, counseling services, and disability support services), for delivering important campus training (e.g., Sexual Harassment Prevention Training), and for connecting students with other campus programs (e.g., common reader programs and student activities).

For many universities, the introductory communication course is also acknowledged to be a course in which students have an opportunity to integrate themselves into the college experience. Anecdotally, students get to know one another through assignments and in-class activities and discussions that require a degree of self-disclosure, and it is common for students to develop friendships and engage with faculty in such interactive small class settings, which have been linked to academic achievement and student retention (Carini, Kuh, & Klein, 2006; Gallup, 2014; Soria & Stebleton, 2012). Even though we would expect introductory communication skills courses to increase perceptions of similarity, belongingness, and closeness—especially if students are increasing their use of effective dialogic communication skills, rhetorical sensitivity, and interpersonal and small group communication skills as they learn to build those skills that are important outcomes in these courses—research has not yet tested whether there is a measurable difference in the degree to which students feel connected to one another as a result

of taking an introductory communication course. Nor have scholars examined whether each of the two most popular forms of the introductory communication course have different effects. The goal of this study is to assess whether students grow in their levels of perceived homophily and connectedness as result of taking an introductory communication course, which would be an indication that students are using many of the communication skills that they are learning in the course. At the same time, we will assess the relative effectiveness of the two most popular formats for the basic communication course in order to explore whether there might be a good reason for a university to choose one version of the basic course over another if one course does more than the other to achieve these outcomes and, by extension, assist with campus student satisfaction, success, and retention initiatives.

## Literature review

### Homophily

When it comes to establishing relationships, individuals tend to be attracted to and choose similar others for friendship (Burlison & Samter, 1996). This notion stems from early research on homophily, which is defined as the perceived similarity between individuals in background and attitudes (McCroskey, Richmond, & Daly, 1975), and the tendency for individuals with similar attributes to affiliate with one another (Lazarsfeld & Merton, 1954). It is for this reason that homophily is an important component of relational development (McCroskey, Hamilton, & Weiner, 1974). Overall, research on homophily purports that interactions between similar individuals occur at a higher rate than interactions between dissimilar individuals (McPherson, Smith-Loving, & Cook, 2001). Individuals can perceive background homophily, which is similarity in terms of their shared experiences, and/or attitude homophily, which refers to similarities in attitudes, beliefs, and values (McCroskey, Richmond, & McCroskey, 2006).

Kandel (1978) explains the socialization and selection process through which homophily is developed. Individuals share and learn appropriate behaviors from one another and seek out individuals who they perceive to share similar attributes. This process hinges on the breadth and depth of information that individuals self-disclose about themselves. Self-disclosing information about oneself leads to greater intimacy in relationships (Taylor & Altman, 1966). The relationship between homophily and self-disclosure is cyclical in that homophily leads to more frequent interactions, and

frequent and effective reciprocal exchanges of personal information lead to greater perceived homophily (Rogers & Showmik, 1971). Usually, individuals' perceptions of homophily are highly accurate. Burleson and Samter (1996) concluded that because friendship pairs tend to score similarly on measures of cognitive complexity and communication skill level, they are likely drawn to others they perceive as most like themselves. In an educational setting, students' perceptions of homophily with the instructors and students around them are likely to greatly influence their communicative interactions and overall educational experiences in the classroom.

**Instructor-student homophily.** The vast majority of the homophily research in instructional communication has focused on the perceived similarities between students and instructors. According to Powell, Hickson, Hamilton, and Stuckey (2001), students report gathering information about the similarity of an instructor to themselves as a course progresses. Often, instructors self-disclose information about themselves to clarify course content, promote discussion, and share examples (Downs, Javidi, & Nussbaum, 1988). When instructors disclose personal pictures, messages from family and friends, and opinions on certain topics on social media sites, students may perceive similarities between themselves and the instructor (Mazer, Murphy, & Simonds, 2007). Students then use perceptions of homophily to help guide academic decisions involving their instructors (e.g., recommendation letters, enrollment in future classes, selecting a faculty advisor or mentor). Specifically, Waldeck, Orrego, Plax, and Kearney (1997) found that students searched for similar interests when selecting a faculty advisor and made repeated attempts to discover common areas of personal and professional interest with that instructor prior to initiating a relationship. Similarly, Chao, Walz, and Gardner (1992) found that students who were able to personally select their advisors cited the similarity of goals and interests as important factors in their selection process.

The information that students gather about the similarity of instructors to themselves not only influences their academic decision-making processes, but also impacts their academic performance. When students perceive homophily with their instructor, they are also more likely to actively participate during class, complete their homework, and pay more attention to their instructors (Elliot, 1979; Glascock & Ruggiero, 2006; Myers et al., 2009). It appears that students' perceptions of homophily with their instructors foster the development of an interpersonal relationship between instructors and students by creating a sense of closeness and connection through common interests and shared goals (Wheless, Witt, Maresh, Bryand, & Schrodt, 2011), and higher levels of perceived attitude homophily in

particular are associated with greater relational satisfaction, communication satisfaction, and affect for teacher (Hosek, 2015). The development of this type of relationship is an important predictor of student motivation (Frymier & Houser, 2000; Keller, 1987), as perceptions of homophily fulfill students' needs for affiliation and self-confidence. Furthermore, Wheelless (1974) found that individuals who perceive themselves as dissimilar to a speaker often reject the information that person presents, so it is important for instructors to establish common ground with students in order to facilitate learning of new concepts and to meet other classroom communication and learning goals.

**Student-student homophily.** Less research has focused on students' perceptions of homophily with other students in their classes. However, research that examines peer homophily suggests similar academic benefits for students. Students may befriend similar others initially, but just as Bandura (1986) suggests that personal beliefs and behaviors are learned through interactions, those perceived similarities strengthen over time through repeated interactions with classmates (Syed & Juan, 2012). It is through this process that peers are able to support one another and aid in the process of developing a personal identity (Brechtwald & Prinstein, 2011). Students may heavily rely on perceptions of homophily when selecting peer group members or friends because of the "social safety" such relationships provide in dealing with the stress of a new and challenging intellectual environment (Park, Rethemeyer, Bryce, Andersen, & Kim, 2011). After all, similarities in attitude, background, and conceptual style lead to the reduction of uncertainty in initial interactions (Berger & Calabrese, 1975).

Although McPherson et al. (2001) warn that homophily can limit an individual's social experiences, research also suggests that students' interactions with similar peer groups tend to be influential experiences. For example, when students surround themselves with similarly highly motivated peers, their motivation and academic achievement increases (Estell, Farmer, Cairns, & Cairns, 2002). Additionally, Salonen, Vaura, and Efklides (2005) found that peer dyads can educate one another on metacognitive techniques such as assessing learning strategies when given the opportunity to do so. Therefore, the structure of the class itself seems to be an important determinant of students' perceptions of homophily and academic success in the classroom.

During the first semester of college, particularly in a large public institution, students are likely to encounter many students whom they might initially perceive as different on a variety of dimensions, including race, ethnicity, religion, national

culture, and language, to name a few. At the same time, many students will find themselves in an environment in which they do not know many (if any) other students in the classroom, especially on a residential campus away from their hometowns, so there is a risk that students will feel isolated, out of place, and perceive that they are part of an out-group. However, if a course can be structured in ways that give students the opportunity to interact with other students, participate in reciprocal self-disclosures through speeches and other in-class exercises, engage in meaningful conversations with faculty and students, and receive careful feedback, then perhaps such course structures could facilitate a sense of similarity with other students in the midst of their diversity. Since introductory oral communication courses, including both public speaking and hybrid courses, are typically small courses that offer numerous opportunities for these types of classroom engagements, these courses have the potential to help students experience increased homophily with their classmates as a result of taking the class. Additionally, since audience members tend to reject information presented by speakers who seem dissimilar (Wheless, 1974), students in introductory communication skills courses should be learning to establish perceptions of similarity with their classmates to achieve their own communication goals. However, public speaking courses tend to focus more on individual performance and success, while hybrid courses add an emphasis on interpersonal and group interactions, so it is likely that students who take the hybrid course will experience greater increases in perceived homophily than students who take the public speaking course. Therefore, we propose the following hypotheses:

H1a: Student perceptions of homophily will increase as a result of taking either a public speaking or hybrid introductory communication course.

H1b: Student perceptions of homophily will increase more as a result of taking a hybrid introductory communication course than a public speaking course.

### **Connected classroom climate**

If introductory communication courses can increase students' perceptions of similarity, then it is also possible that such courses might increase perceptions of

student-to-student connectedness and a sense of belonging. Previous communication literature has established that communication climate is an important element of the college classroom (Dwyer et al., 2004). In classrooms, the climate is determined by the social and psychological context of the relationships within it (Rosenfeld, 1983). Marzano (1992) framed the classroom as a connected and supportive environment, and other researchers began to pay more attention to this construct after Dwyer et al. (2004) observed that this was an understudied area of instructional communication and developed the Connected Classroom Climate Scale to facilitate research in this area. We now know that how students perceive the valence of a classroom climate carries major implications for their overall learning outcomes. When students perceive themselves to be connected with other students in the classroom, they tend to be more actively involved in the class, regardless of the size of the class (Sidelinger & Booth-Butterfield, 2010). There could be many explanations for this finding, but perhaps students appreciate opportunities that allow them to interact with other students and to take more responsibility for learning the material themselves (Jones & Sanford, 2003). Such learning opportunities not only help students learn the course content, but also help them learn larger lessons about how to express themselves and how to work well and effectively communicate with others on a professional level (Jones & Sanford, 2003). Because of these experiences, it is not surprising that connected classroom climate is positively related affective learning, increased cognitive and affective learning, academic efficacy, motivation, and participation (Dorman, 2001; Johnson, 2009; Mazer & Hunt, 2008; Sidelinger & Booth-Butterfield, 2010). At the same time, perceptions of a negative or defensive classroom climate are associated with increased stress, likelihood to drop out of college, and poor academic performance (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994; Demakis & McAdams, 1994).

Myers (1995) suggests that instructors set the tone for students in their classroom. Instructors can facilitate the creation of positive and supportive classroom climates by modeling supportive communication, demonstrating confirming behaviors, treating students with mutual respect, creating positive interdependence among students, infusing humor into the classroom, engaging in affinity-seeking and immediacy behaviors, and utilizing positive slang (Deutsch, 2000; Johnson, 2009; Jones & Sanford, 2003; Mazer & Hunt, 2008; Myers, 1995; Sidelinger & Booth-Butterfield, 2010; Stuart & Rosenfeld, 1994). Moreover, establishing positive instructor-student relationships can lead to a number of benefits



for students including increased cognitive and affective learning and can even have the power to foster a comfortable and positive classroom climate.

However, simply establishing connections between the instructor and students is not always enough. Sidelinger and Booth-Butterfield (2010) point out that even the most engaging and well-respected instructors can find students unresponsive in classrooms that lack student connectedness with other students. If students do not feel a connection with other students, they may still feel uncomfortable asking or answering questions. This is why student might benefit when courses are structured in ways that promote increased student interactions, self-disclosure, and opportunities to connect with one another. Although research demonstrates that student-to-student connectedness in the classroom provides a number of academic and social benefits for students, this type of connected classroom climate may also unexpectedly form out of shared negative experiences in the classroom. For example, when students experience negativity in the classroom they may seek out student-student relationships as a possible coping mechanism. Sidelinger, Bolen, Frisby, & McMullen (2011) found that student connectedness in the classroom offers the potential to reduce negative associations between instructor irresponsibility, derisiveness, and student involvement. Although students may not feel connected to their instructor, establishing a connection with their peers allows them to sustain an open system whereby positive output into the classroom system may still occur. Similarly, Johnson (2009) suggests that students may develop a strong sense of classroom community based on the shared dislike of an instructor or course subject matter. It is in this way that students who feel like they are a part of a connected classroom may be motivated to still attend class, complete coursework, and motivate others to do the same, even if the instructor or subject is disliked. The fact that student connectedness can mitigate the negative effects of teacher misbehaviors or a lack of interest in the course itself and still enable students to attend and succeed demonstrates the power of such relationships among students.

Prior studies examining student connectedness in the classroom have largely focused on the role of the instructor in facilitating connected classroom climates (Johnson, 2009; Jones & Sanford, 2003; Myers, 1995; Sidelinger et al., 2011; Sidelinger, Bolen, Frisby, & McMullen, 2012; Sidelinger & Booth-Butterfield, 2010). This study focuses on the role of the actual course structure in facilitating student perceptions of a connected classroom climate. Specifically, we examine whether courses with activities and assignments that require student interactions with one another and self-disclosure are successful at eliciting stronger perceptions of

homophily and connectedness among students. College students in Glaser and Bingham's (2009) study noted that activities that required them to interact more frequently such as speeches, working groups, peer feedback, and class discussions helped them feel more connected to one another. The students explained that these exercises provided opportunities to listen to, encourage, and help one another, which helped them recognize shared feelings of vulnerability in the public speaking course. As a result, the students reported that they responded more compassionately and gently toward one another. The present study expands on Glaser and Bingham's (2009) work to determine whether such interactive course structures are equally effective in the two most common types of the introductory or basic communication courses in facilitating increased perceptions of a connected classroom climate over time.

Hence, we posit the following:

H2a: Student perceptions of connected classroom climate will increase as a result of taking either a public speaking or hybrid introductory communication course.

H2b: Students perceptions of a connected classroom climate will increase more in a hybrid introductory communication course than a public speaking course.

Because researchers suggest that course structures that promote increased interactions among students are beneficial experiences for students (Glaser & Bingham, 2009; Park et al., 2011), students need to be present in class in order to reap the benefits of those increased interactions with their classmates. Thus, in order to more effectively evaluate the impact of in-class interactions versus natural changes in perceived homophily and classroom climate over time, we propose the following additional hypotheses:

H3: Attendance in an introductory communication course will be positively correlated with perceptions of homophily and connected classroom climate at the end of the course.

H4: Attendance, homophily, and connected classroom climate will positively predict significant variance student success in introductory communication classes.

## **Method**

### **Participants and course structure**

All students who were enrolled in either of the two face to face introductory communication courses at a diverse, large public university in the Mid-Atlantic region of the United States were invited to participate in this study. These two courses included (1) a public speaking course, and (2) a hybrid introduction to communication course that included foundations of communication, interpersonal communication, public speaking, and small group communication. Both of these courses are delivered in a face to face format and meet the oral communication requirement for general education at this university, and all students enrolled in the university must take one of these two courses. The public speaking course is capped at 24 students, and the hybrid course is capped at 27 students. These courses were taught by a total of 50 instructors during the semester in which this study was conducted. Students who were enrolled in public speaking delivered five formal speeches over the course of the semester, but also spent time working in small groups and dyads during peer workshops and in-class group activities. Students who were enrolled in the hybrid introduction to communication course completed three group projects, three group presentations, and one individual paper. Students enrolled in both courses completed an annotated bibliography assignment and a final exam. Both courses also included a variety of in-class activities, assignments to hold students accountable for coming to class prepared each day, and required that drafts of assignments be prepared in advance so that student could receive feedback and revise their work before the final assignment was due.

Student attendance in both courses was not required, and no points were specifically assigned to attending class each day. However, students did earn points for in-class activities that promoted active student involvement and provided low-stakes opportunities to practice communication skills. Because students must be present in class to participate in these exercises, the points assigned to each exercise are somewhat linked to attendance. However, there was no grade penalty for multiple absences.

## Procedures

All students in the class were required to complete an online pre-survey and post-survey as a course assignment, which included several competency measures and demographic items. The pre-survey was available during the first two weeks of the semester, and the post-survey was available via Blackboard during the last two weeks of the semester. Additionally, gradebooks and attendance records were collected from course instructors after the semester concluded, and data was matched across all of the data collection methods at an individual student level before personal identifying information was removed. At the beginning of each survey and on the syllabus contract turned in during the first week of class, students were given the option to opt-out of having their results included in any data analysis, so all students who did not consent to having their work included in research were removed from the data set, per IRB instructions.

A total of 1873 participants were included in the final data set. This data set included grade data for all 1873 students, attendance data for 976 students, pre-survey data for 1481 students, and post-survey data for 1104 participants. Of the students who reported demographic data in the pre-survey, 44.3% ( $N = 656$ ) were male and 54.4% ( $N = 806$ ) were female. The mean age of participants was 19.07 years. For ethnicity, 51.1% ( $N = 724$ ) of participants reported that they were White or Caucasian, 22.8% ( $N = 323$ ) were Asian, 11.4% ( $N = 161$ ) were Black or African American, 8.8% ( $N = 77$ ) were Hispanic or Latino, 5.4% ( $N = 77$ ) were more than one, 0.3% ( $N = 4$ ) were American Indian or Alaska Native, and 0.3% ( $N = 4$ ) were Native Hawaiian or Pacific Islander. 64.9% ( $N = 961$ ) of participants were freshmen, 21.7% ( $N = 321$ ) were sophomores, 8.7% ( $N = 129$ ) were juniors, 4.6% ( $N = 68$ ) were seniors, and 0.1% ( $N = 2$ ) were non-degree seeking students.

## Instrumentation

**Homophily.** Homophily was measured using McCroskey, Richmond, and Daly's (1975) homophily scales, which include a four-item Attitude Homophily Scale and a four-item Background Homophily Scale. Participants were asked to use a 7-point semantic differential scale to rate their classmates using paired phrases such as "is like me" and "is unlike me." Alpha reliability estimates for both measures are reported to be typically above  $\alpha = .80$ . For our study, the Attitude Homophily Scale had a reliability of  $\alpha = .71$  for the pre-survey and  $\alpha = .78$  for the post-survey. The Background Homophily Scale had a reliability of  $\alpha = .44$  for the pre-survey and  $\alpha =$

.58 for the post-survey. Since the reliability for the Background Homophily Scale did not meet the minimum acceptable reliability criteria of .70 (Lance, Butts, & Michels, 2006; Nunnally, 1978), only the Attitude Homophily Scale will be used in our analysis.

**Connected classroom climate.** Connected Classroom Climate was measured using Dwyer et al.'s (2004) Connected Classroom Climate Inventory, which measures connectedness among students in a university classroom. This scale includes 18 items that are measured with a 5-point Likert scale, and includes items such as, "I feel a strong bond with my classmates" and "The students in my class are supportive of one another." This scale was originally found to have an overall reliability of  $\alpha = .94$  (Dwyer et al., 2004), and our study, the scale had a reliability of  $\alpha = .93$  in the pre-survey and  $\alpha = .97$  in the post-survey.

**Attendance.** Instructors were asked to record attendance in class each day and to turn in their records at the end of the semester. Because there were several different meeting patterns for the class (once a week, twice a week, and three times a week), each meeting pattern held class for a different number of days, so attendance records were converted into a proportion of classes attended for each student. Some instructors failed to track and report attendance, so attendance data was only available for 976 students.

**Student success in the class.** Student success in the class was measured using the final course grade. The course grade was computed as a proportion of possible points earned, so a student who earned 900 of the possible 1000 points would have earned a score of .90. While the course grade is not a perfect measure of student learning or achievement of the course outcomes in the course, course grades should be closely related to the achievement of learning outcomes since the major course assignments are designed to assess those outcomes.

## Results

### Homophily and classroom climate

A within-subjects split plot MANOVA was conducted to determine whether perceptions of attitude homophily and connected classroom climate changed over the course of the semester when students were enrolled in public speaking or hybrid introductory communication courses. Multivariate tests showed that there were no between subjects effects for course,  $\lambda = .999$ ,  $F(2, 940) = .40$ ,  $p > .05$ . However, there were significant within-subjects effects for time,  $\lambda = .778$ ,  $F(2, 940) = 134.115$ ,

$p < .05$ ,  $\eta_p^2 = .222$ , and time by course,  $\lambda = .990$ ,  $F(2, 940) = 4.518$ ,  $p < .05$ ,  $\eta_p^2 = .144$ . Univariate tests of within-subjects effects were significant for attitude homophily,  $F(1, 941) = 33.744$ ,  $p < .05$ ,  $\eta_p^2 = .035$ , and for connected classroom climate,  $F(1,941) = 262.252$ ,  $p < .05$ ,  $\eta_p^2 = .218$ . Tests of within-subjects effects were also significant for connected classroom climate by course type,  $F(1,941) = 7.644$ ,  $p < .05$ ,  $\eta_p^2 = .008$ , but not for attitude homophily by course type,  $F(1,941) = 2.999$ ,  $p > .05$ . This means that H1a and H2a were supported because students enrolled in both courses had significant increases in the perceived levels of attitude homophily and connected classroom climate by the end of the semester. H1b and H2b were rejected because students who took public speaking had slightly more growth in perceptions of classroom climate than students who took the hybrid introduction course, and there was no difference between the courses in the amount that perceptions of homophily increased. Interaction graphs depicting the results are shown in Figures 1 and 2.

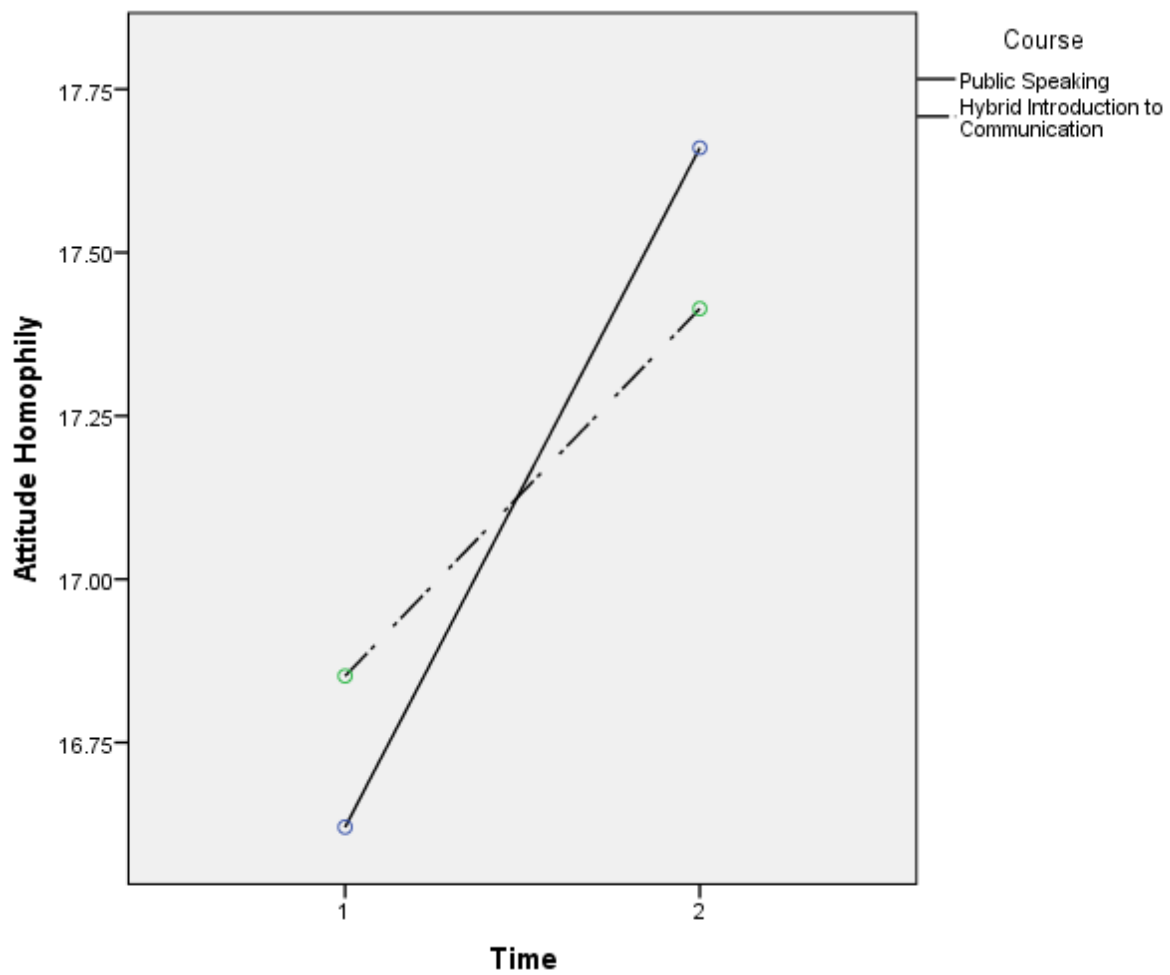


Figure 1. Attitude Homophily by Course by Time.

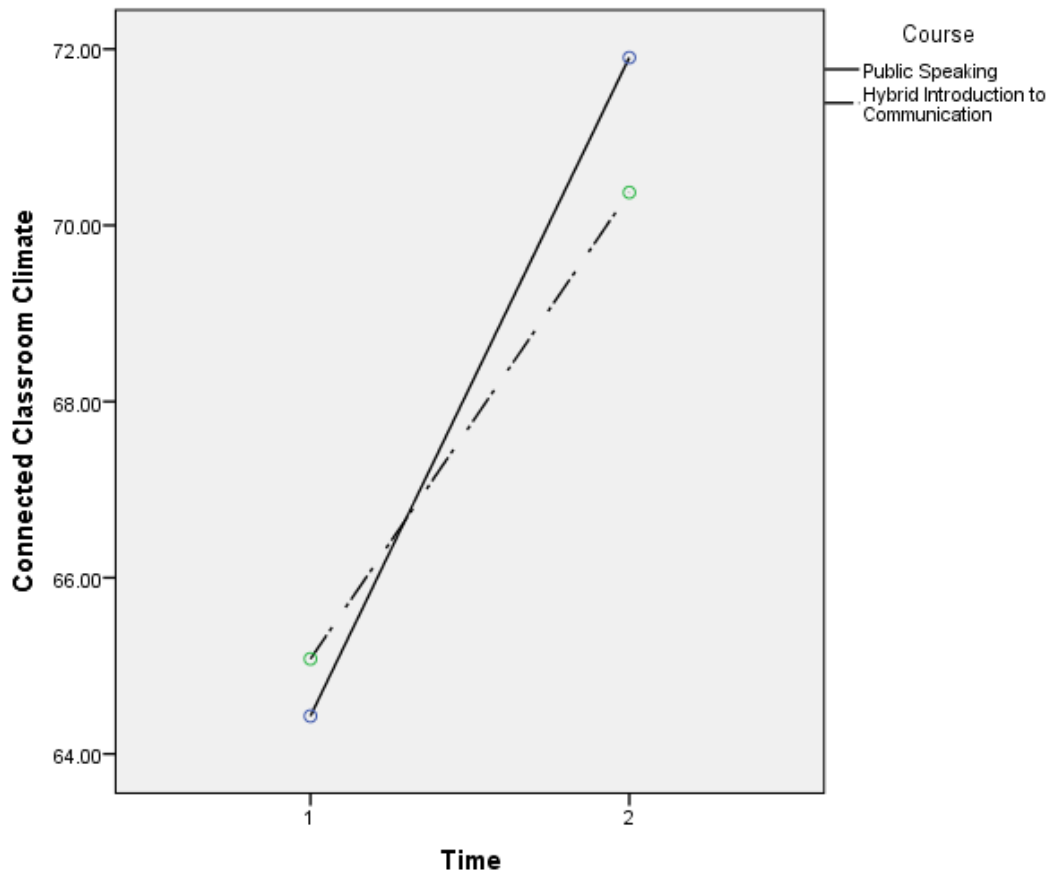


Figure 2. Connected Classroom Climate by Course by Time.



Table 1  
Means and standard deviations by course

	Public Speaking	Hybrid
Attitude Homophily, Pre-Survey	$M = 16.62$ $SD = 3.81$	$M = 16.85$ $SD = 3.88$
Attitude Homophily, Post-Survey	$M = 17.66$ $SD = 4.21$	$M = 17.41$ $SD = 4.38$
Connected Classroom Climate, Pre-Survey	$M = 64.42$ $SD = 8.91$	$M = 65.08$ $SD = 8.63$
Connected Classroom Climate, Post-Survey	$M = 71.90$ $SD = 11.69$	$M = 70.37$ $SD = 10.61$
Attendance	$M = .89$ $SD = .15$	$M = .91$ $SD = .12$
Final Grade	$M = .83$ $SD = .16$	$M = .84$ $SD = .13$

### Attendance

To find out whether students who attend class more frequently are more likely to have stronger perceptions of homophily and connected classroom climate, pairwise correlations were run between attendance, attitude homophily, and connected classroom climate. Correlations between attendance and the pre-test measures of attitude homophily ( $r = .054, p > .05$ ) and connected classroom climate ( $r = .033, p > .05$ ) were not significant, but correlations between attendance and the post-test measures of attitude homophily ( $r = .084, p < .05$ ) and connected classroom climate ( $r = .097, p < .05$ ) were significant. While initial perceptions of homophily and climate did not appear to impact attendance, attendance did influence perceptions of homophily and climate at the end of the semester, so H3 was supported.

Table 2  
Correlations by course

	1	2	3	4	5	6
	Attitude Homophily (Pre)	Connected Classroom Climate (Pre)	Attitude Homophily (Post)	Connected Classroom Climate (Post)	Attendance	Final Grade
1	1	.279**	.510**	.182**	.035	.034
2	.338**	1	.241**	.226**	.059	.077*
3	.420**	.096*	1	.308**	.076	.069
4	.249**	.346**	.404**	1	.143*	.149**
5	.074	-.009	.108	.062	1	.645**
6	.027	-.060	.059	.090*	.652**	1

Note: Correlations above the diagonal are for the public speaking course. Correlations below the diagonal are for the hybrid introductory course.

\*  $p < .05$

\*\*  $p < .01$

### Predictors of course performance

A multiple regression was conducted to determine whether attendance, homophily, and classroom climate predict student success in the course. When students enrolled in both courses were analyzed together, the regression analysis indicated that 20% of the variance in course grade could be predicted by attendance, attitude homophily, and connected classroom climate at the end of the semester. Analysis of regression coefficients indicated that attendance predicted the greatest variance,  $\beta = .422$ ,  $t = 11.660$ ,  $p < .05$ , followed by connected classroom climate,  $\beta = .122$ ,  $t = 3.151$ ,  $p < .05$ . Once the other variables were accounted for, attitude homophily did not predict significant unique variance in the final course grade,  $\beta = -.023$ ,  $t = -.594$ ,  $p > .05$ .

However, when the same multiple regression was run for the public speaking course and the hybrid course separately, the results were slightly different. For public speaking, the regression analysis indicated that only 17% of the variance in course grade could be predicted by attendance, attitude homophily, and connected

classroom climate at the end of the semester. Analysis of regression coefficients indicated that attendance predicted variance,  $\beta = .402$ ,  $t = 7.427$ ,  $p < .05$ , but attitude homophily,  $\beta = -.052$ ,  $t = -.946$ ,  $p > .05$  and connected classroom climate,  $\beta = .594$ ,  $t = .078$ ,  $p > .05$ , did not.

For the hybrid introductory course, though, the regression analysis indicated that 29% of the variance in course grade could be predicted by attendance, attitude homophily, and connected classroom climate at the end of the semester. Analysis of regression coefficients indicated that attendance predicted the greatest variance,  $\beta = .512$ ,  $t = 10.948$ ,  $p < .05$ , followed by connected classroom climate,  $\beta = .148$ ,  $t = 2.843$ ,  $p < .05$ . Once the other variables were accounted for, attitude homophily did not predict significant unique variance in the final course grade,  $\beta = -.015$ ,  $t = -.284$ ,  $p > .05$ .

Taken together, these results suggest that attendance is a strong predictor of student success in an introductory communication course and that connected classroom climate is a significant predictor of student success in hybrid introductory courses, but not in public speaking courses. Attitude homophily has no impact on student success in this study once other variables are accounted for.

### Discussion

The purpose of this study was to examine the role of an introductory communication course structure on students' perceptions of homophily and connected classroom climate. Our results showed that students perceived increased levels of attitude homophily and connected classroom climate by the end of the semester, regardless of whether they were enrolled in a public speaking or hybrid introductory course, but students enrolled in the public speaking course perceived a slightly larger increase in connected classroom climate than students in the hybrid introductory to communication course. This suggests that as students work together in both classes and disclose information about themselves to others, whether in public presentations or small group activities, they begin to feel like they share more in common with their classmates, feel more connected to one another, and believe that their classmates care about them. However, it is possible that students who are enrolled in public speaking are seeing greater gains in connected classroom climate because they are disclosing more information about topics that are important to them through their speech performances than students disclose when working on assignments with small groups in the hybrid introductory course. Alternately, it is possible that classmates' support is felt more strongly during anxiety-laden individual

public speaking performances than when relying on group members to collaborate to produce group papers and team presentations, particularly if some group members engage in social loafing.

These findings are important because they show that, in addition to helping students grow in communication competence in the ways that so many other studies and assessments have shown (e.g., Hunter, Westwick, & Haleta, 2014), introductory communication courses also help students feel more connected to each other and, as an extension, should help students feel a greater sense of belongingness on campus. This result holds major implications for those departments currently struggling to retain communication as a required component in general education programs at universities across the country. Previous research shows that students who feel a sense of belonging on campus are more likely to do well in their classes and persist to on-time graduation (Berger & Milem, 1999), which suggests that introductory communication courses like these could play an important role in university retention and graduation initiatives and should be considered as a potentially important component of a first year experience program, particularly since the greatest attrition in students occurs after the first year (National Student Clearinghouse, 2014). Since upper division students are more likely to have developed networks of friends and found activities that fit their interests than first-year students, these results also suggest that universities should consider requiring that students take the introductory communication course during their first year on campus when they might be especially likely to benefit from the sense of connection that is developed as a result of taking one of these classes as well as build communication skills that can be used throughout their academic career. However, one limitation of this study is that we could not measure the growth of students who were not enrolled in either of these communication courses, so future research should consider collecting data with students enrolled in an introductory communication course as well as a control group that includes students who are not enrolled in an introductory communication course in order to assess whether a portion of this growth is due to students' general experiences adapting to the university.

Second, we found that attendance is related to levels of attitude homophily and connected classroom climate at the end of the semester, but not at the beginning of the semester. This suggests that the initial impressions that students form of their classmates are not really influencing students' decisions to come to class. Instead, it is likely that a sense of academic responsibility, course assignments, attendance and

participation policies, and other classroom and personal factors are much stronger influencers of attendance. However, it makes sense that attendance appears to be influencing perceptions of attitude homophily and connected classroom climate at the end of the semester, as individuals need sustained contact or communication with others over the course of the semester to feel connected to them. Moreover, this provides an additional rationale for why communication programs should consider implementing an attendance policy in the basic course, regardless of which type of basic course has been selected at that university.

Finally, it is important to note that, while homophily and connected classroom climate are important outcomes in that they help students feel a greater sense of belonging and sense greater similarity with their diverse classmates, these variables do not always predict greater academic success. Classroom climate impacts student success in the hybrid introductory course but not in the public speaking course, but it is possible that this because students in the hybrid course are heavily interdependent on one another since there are several group papers and presentations. Public speaking students must rely on each other for feedback during peer workshops and peer evaluations, but do not depend on their classmates for their grades in the same way. It is probably a good thing that attitude homophily is not related to success in the class, since this might indicate that students have high enough cognitive complexity to separate whether they agree with their classmates on specific issues from whether they can be connected to one another and support each other's success. This might also be an indicator that diversity is valued and that students who perceive that they do not share their peers' attitudes on particular issue are not being hindered in their class performance. However, it is important to note that this study was conducted at a highly diverse university that many students choose to attend because of that diversity, so additional research should examine whether similar effects exist on more homogenous campuses where there might be more distinct in-groups and out-groups.

In conclusion, this study contributes to current instructional communication literature on student connectedness in the classroom by looking beyond the instructor's role in developing a connected classroom climate. Instead, this study examined whether the structure of the two most popular formats of the basic communication course increased opportunities for student collaboration as a factor related to student perceptions of homophily and connectedness as well as overall academic performance. Because employers are increasingly seeking graduates who can demonstrate strong communication skills, it is important for instructors to

structure their courses in ways that allow students to both learn about and practice communication skills in ways that are most beneficial for them. This is particularly important in introductory communication courses that are a required part of the general education program at many universities because for some students, that may be the only formal communication course they take during their education. The results of this study support previous findings that suggest positive benefits for students who share a sense of connectedness with other students in the classroom. This study also provides support for the unique role that course structures play in fostering student perceptions of connectedness. Future research should continue to examine how specific collaborative course requirements uniquely impact perceptions of connectedness among students.

### Author information

Melissa A. Broeckelman-Post (Ph.D., Ohio University, 2009) is an Assistant Professor and the Basic Course Director at George Mason University.

Brenda L. MacArthur (M.A., Texas State University, 2014) is a Ph.D. candidate at George Mason University.

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