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FROM THE FIELD

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Abstract

This case study used social network analysis methods to examine the evolution of friendship and academic collaboration networks among students in first-year seminar courses. Specifically, our research compared friendship and academic collaboration networks among students in courses with a significant focus on community engagement with networks among students in courses that did not require community engagement. We analyzed these networks using UCINET (Borgatti et al., 2002), a social network analysis software package. We first studied network cohesion measures—density, diameter, and average path length—to understand how easily information spread among classmates. Secondly, we studied network centralization measures—degree, closeness, and betweenness—which help to identify power inequalities in social groups (Hanneman, 2001). Results of our study suggest that integrating community engagement projects into curricula helps reduce power inequalities. In other words, community engagement projects appear to encourage the creation of connected friendships among first-year students.

Building community is an important part of the undergraduate experience and has become a focus for faculty and staff across institutions of higher education (Campus Compact, 2019). One strategy for building community in the classroom is through community engagement projects. As Furco (1996) noted, community engagement projects can be defined and conceptualized in many ways, starting with the importance of "reciprocal learning" (Sigmon, 1979, as cited in Furco, 1996, p. 2). Our case study used social network analysis (SNA) to compare the strength of support systems among students enrolled in first-year experience courses including a significant community engagement component with support systems among first-year students in courses without a community engagement component.

We explored the role of community engagement projects in the evolution of social networks, specifically friendship and academic collaboration networks, among students. There is not an extensive body of research in the community engagement literature that utilizes SNA to understand the role of community engagement in building peer-to-peer friendships and academic relationships. Most SNA research in the field of education has concentrated on online learning platforms and/or in-class interactions among students (e.g., Grunspan et al., 2014; Han et al., 2016; Naim et al., 2010; Reffay & Chanier, 2003), with one exception being a pilot study conducted by Teymuroglu (2013) that evaluated the success of a community engagement project with SNA methods.

Our goal in this paper is to demonstrate the potential of SNA techniques to offer a new and broader perspective on the benefits of community engagement projects in first-year seminar courses. We present a case study from a small liberal arts institution that provides some insight into the important role that community engagement can play in building student friendships and academic collaboration networks in higher education.

Community Engagement in Higher Education

Research has demonstrated that community engagement and service-learning courses have positive impacts on students, particularly in connection with their interpersonal skills; students have been shown to work and communicate more effectively with their peers as a result of participating in a community engagement project (Eyler & Giles, 1999; Gallini & Moely, 2003; Vogelgesang & Astin, 2000). For example, analyzing data from the Cooperative Institutional Research Program (CIRP), Vogelgesang and Astin (2000) found that interpersonal development, particularly communication skills, improved with community engagement–related coursework. Additionally, Astin et al.'s (2000) quantitative study reported positive effects of course-based community engagement service on students' writing skills and engagement in the classroom. According to Simons and Cleary (2006), students' reflection and self-report data showed that community engagement projects helped them develop more tolerant attitudes toward working with a diverse group of individuals and improved their communication skills. Additionally, one of the benefits of community engagement projects is that they provide students with opportunities to improve their conflict resolution skills and interact with others from diverse backgrounds (Moely et al., 2002). Similarly, Munter (2002) discussed how integrating community engagement projects into a wide variety of courses can help students feel connected to their communities and can encourage them to take responsibility in addressing social justice issues.

Given that much of the research on community engagement has been conducted with self-report questionnaires composed of Likert scale measures, open-ended questions, and reflection essays, our analysis extends the literature by presenting a new perspective —that of SNA methods—on the assessment of community engagement–related coursework.

Utility of SNA for Research on Student Learning

Amid the rise of research on postsecondary education, SNA exists as a useful tool to examine classroom structure and the effects of relational networks on student experience and performance (Cela et al., 2015; Grunspan et al., 2014; Han et al., 2016; Sie et al., 2012). Within the SNA literature related to education and community building, several studies focus specifically on cohesion and centralization measures (Ahn & Rodkin, 2014; Brewe et al., 2012; Dawson, 2008; Reffay & Chainer, 2003). For example, Dawson (2008) measured students' sense of community and their roles in the classroom in terms of centrality and cohesion by studying communication logs. Reffay and Chanier (2003) argued that SNA can serve as a useful tool to analyze group cohesion in online educational settings, and they also suggested that cohesion plays an integral role in the establishment of advantageous collaborative learning environments. Similar benefits may arise from a network evolution that results in equal power dynamics among members; in other words, lower network centralization measures might facilitate a collegial environment within the classroom (Ahn & Rodkin, 2014). Brewe et al. (2012) used centrality measures to understand the patterns of interaction in a physics learning center.

Aiming to analyze how collaborative learning techniques affect student interaction, Naim et al. (2010) examined the centrality measures of degree, closeness, and betweenness in a Master of Public Administration elective course at the University of Central Florida. As both friendship networks and a network of study partners developed over the course of the term, the use of collaborative learning techniques in the classroom increased student interaction in the networks (Naim et al., 2010). Analyzing fourth and fifth graders over the span of one academic year, Ahn and Rodkin (2014) also employed the centrality measures of degree, closeness, and betweenness to study how the classroom network structure evolved over time, specifically how the social status of aggressive students changed. The measures of friendship centralization and friendship density suggested that a network with relatively equal power dynamics (i.e., a network with a lower degree of centralization) is most beneficial for network members (Ahn & Rodkin, 2014).

Finally, and particularly relevant to the current study, Teymuroglu (2013) conducted a pilot study that surveyed students (N = 16) in a first-year introductory statistics course. Students in the course participated in a group-based community engagement project with their university's child development and student research center (CDC) in which they studied ways to increase awareness of childhood obesity among CDC students and their parents. Teymuroglu (2013) analyzed how the community engagement project affected within-group dynamics of the friendships and academic relationships among students. The study provided evidence that, while the number

of academic links increased over the course of the term, the number of friendship links decreased. In addition, the study showed that students picked their friends voluntarily but chose academic collaborators based on merit.

The current study builds upon and draws from the pilot study conducted by Teymuroglu (2013). However, we addressed some of the limitations of that project by increasing the sample size (N = 94), evaluating not just one course but several first-year courses, recruiting courses from outside STEM disciplines, and including a control group of courses with no community engagement projects so that we could measure the effect of community engagement projects on academic and friendship networks.

Network Data Collection and Methodology

Data Collection

After receiving institutional review board approval, we collected self-reported survey data from a sample of students (N = 94) in six first-year seminar classes at two discrete times, once at the beginning and once at the end of the semester. Our control group included three courses with no community engagement component (n = 49 students). These courses focused on a range of topics, including social inequality among college students (Inequality 101), making change through campus initiatives (Be the Change), and evolving as a college student (Create Your Best Life). The three community-engagement-designated (CE-designated) courses (n = 45 students) composed the treatment group. These courses also focused on a variety of topics, including philosophy and theatre (Theatre of Ideas), environmental justice issues (Environmental Activism), and a math-tutoring program for high school students (Strength and Beauty in Mathematics). These courses were approved as CE-designated courses by the Center for Leadership and Community Engagement at Rollins College because they included 15 to 30 hours of community engagement work throughout the semester (See Appendix A for the application form).

The number of enrolled students in each course ranged from 11 to 17 per class. We visited each classroom at two distinct times during the semester to administer self-report surveys; the surveys used at two distinct times were identical. The first visit occurred between the second and fourth weeks of the term, and the second visit occurred within the final four weeks. Students thus completed 8 to 10 weeks of coursework between taking the initial survey and completing the second survey. We administered the printed surveys at the start of the designated class period, and the survey took no longer than 10 minutes for students to complete. The study only took into account survey responses from students who completed both surveys.

The survey comprised six questions, including basic demographic questions (e.g., information on respondents' attributes, such as age and gender), their personal preference to work independently or in a study group as well as egocentric network questions regarding each student's friendships and academic collaborations. We chose to limit the number of nominations in egocentric network questions to five friends and academic collaboration partners. We made this decision after an earlier pilot study showed that students listed "everyone" in the class as their friends and academic collaborators if no limit was set on the number of nominations. The pilot study also showed that "knowing the student prior to college" is a negligible phenomenon, since it is unlikely that two friends will be placed in the same first-year seminar course. In our survey, each respondent was a student in one of the sample Rollins College first-year seminar courses (RCCs). We did not collect information from instructors.

The average age of the students surveyed was 18.19, with a standard deviation of 0.15. Despite a wide range of female-to-male ratios in the individual classes—for instance, 100% of students in the Inequality 101 course identified as female but only 10% of students in the Environmental Activism course identified as female—45.72% of the students surveyed were female, and 54.28% were male.

Data Analysis

SNA methods help researchers identify patterns of friendship and academic collaboration and study the evolution of these networks over time. We utilize network-level measures such as network cohesion and centralization. In our data analysis, we used UCINET (Borgatti et. al., 2002), a SNA software package, to quantify the characteristics of friendship and academic collaboration networks.

In our sample, we constructed friendship and academic collaboration networks based on the set of nominations in each student's survey responses. In the friendship networks, given the size of our sample in each class, we assumed that students A and B were friends if there was at least one directional link between them. That is, if student

Table 1. Participant Information in Each Sample RCC Course

Course	Class size	Response rate (%)	Community engagement project	Average age	Female (%)	Male (%)
Create Your Best Life	14	71.43	NO	18.04	30	70
Inequality 101	17	64.71	NO	18.09	100	0
Be the Change	18	83.33	NO	18.06	66.67	33.33
Environmental Activism	14	78.57	YES	18.27	10	90
Theatre of Ideas	17	100	YES	18.41	17.65	82.35
Strength and Beauty in Mathematics	14	85.71	YES	18.25	50	50

A nominated student B as a friend, we established not only a link from student A to student B but also a link from student B to student A, thus making friendship ties symmetrical. Symmetrizing ties is a commonly used approach in studying friendship network–level variables, especially if the study sample size is small (Feld, 1991; Krackhardt & Kilduff, 1999; Leonard et al., 2008; Manstrandrea et al., 2015; Teymuroglu, 2013). Similarly, if student A nominated student B as someone that they worked with on a course-related problem (or vice versa), we established a relational link between student A and student B in the academic collaboration network. In that sense, we looked at the academic collaboration network as a knowledge-exchange network.

Network-Level Variables: Cohesion and Centralization

We first studied network cohesion measures—density, diameter, and average path—to identify the level of cohesion in friendship and academic collaboration networks. These three measures quantify the frequency of interactions among members and their reachability in the network (Wasserman & Faust, 1994). We first considered network density. The density measure represents the number of actual ties as a proportion of all possible ties in the network (Wasserman & Faust, 1994). In SNA, a density measure approaching 1 indicates that there are many interactions—in our case, many friendship ties or study partner ties—among network members. Density measures help provide an understanding of interactions among classmates; however, as discussed in Valente (2010), density is a problematic measure of cohesion.

Our other two measures of network cohesion, diameter and average path length, are related to the "reachability" of a student in the network. A geodesic path is the shortest path between any given pair of students in the network (Wasserman & Faust, 1994). The network diameter value is the longest such geodesic path in the network (Wasserman & Faust, 1994). A network with a small diameter value can be seen as cohesive because students are relatively close to each other (Moody & White, 2003; Newman, 2010). As indicated in Newman (2010), this measure is easily affected by adding a few students to the network. In a related analysis, we measured the average geodesic path length. This measure is based on mean distances; therefore, it is not much affected by small changes to the network. Individuals in a network with a low average path length can easily spread information to others and have an advantage when it comes to accessing information in the network (Newman, 2010).

We also considered three network centralization measures—degree, closeness, and betweenness. Roughly speaking, the *centrality* of an individual in the network determines the importance of that individual in the network, and *centralization* of a network is a group-level measure that quantifies inequalities of importance among network members (Wasserman & Faust, 1994). Wasserman and Faust (1994) state that

centralization "can be viewed as a measure of how unequal the individual actors are. It is a measure of variability, dispersion, or spread" (p. 176).

Each centralization measure identifies a different kind of inequality in the network. A very common example of a network with high centralization scores in all three measurements is the star network, where only one node is "central" (Wasserman & Faust, 1994). In friendship or academic collaboration networks structured almost like star networks, there are only a few members who hold "central" and "important" positions. High degree centralization, in particular, indicates a high probability of a given network resembling the structure of a star network (Figure 1).

A student with high degree centrality is important in the sense that this student has the most friendship or academic collaboration ties. Here, we adapted Freeman's approach (Freeman, 1977; Freeman, 1978; Freeman et al., 1979) and measured degree centralization by comparing the variability in the distribution of students' degrees with the degree distribution in a star network with the same number of students. The result represents the similarity percentage of the observed network to a star network.

An individual's closeness centrality shows how close that individual is to others in terms of geodesic distances. We studied the network's closeness centralization by reporting its percentage resemblance to the variability of geodesic-path-length differences in the star network (Freeman, 1977; Freeman, 1978, Freeman et al., 1979). A low value of closeness centralization implies that individuals have (about) equal access to information and share similar roles in spreading information.

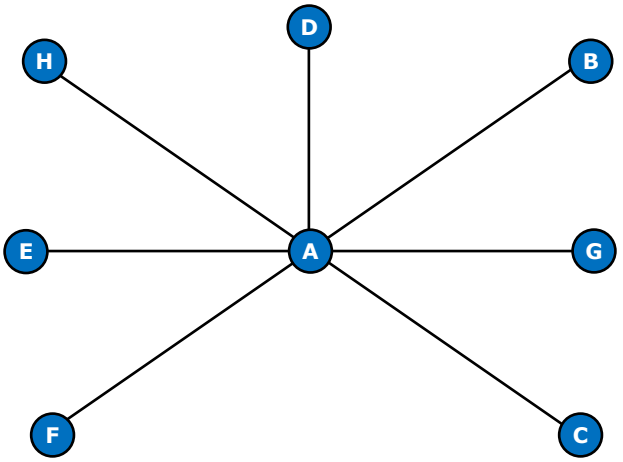
Another important measure is betweenness centrality, which measures how central each individual is in terms of how often they fall on the geodesic path of any other pair of individuals in the network (Wasserman & Faust, 1994). Betweenness centrality measures show that some nodes depend on other strategic nodes that hold bridge positions in the flow of information among network members (Valente, 2010; Wasserman & Faust, 1994). Betweenness centralization decreases as the students obtain equal roles in holding bridge positions in the flow of information among classmates (Valente, 2010; Wasserman & Faust, 1994). Similar to degree and closeness centralization measures, the betweenness centralization measure indicates the variability of the network members' betweenness indices. Therefore, a low betweenness centralization measure shows that there is not a group of students who hold strategic positions in interactions or communication channels in the network.

Results

Cohesion in the Friendship and Academic Collaboration Networks

The three cohesion measures did not reveal major differences between the evolution of friendship and academic collaboration ties in community engagement courses and the evolution of these networks in non–community engagement. In Table 2 shows that the largest improvement in friendship interactions occurred in a non-CE-designated course, Be the Change. The density measure of the friendship network

Figure 1. A Star Network With Eight Nodes, Where Node A Is Located in the Center of the Graph



in that class increased from 0.267 to 0.760. In five out of the six courses, the friendship network density measures showed improvements. In terms of academic collaboration, the highest network density increase, from 0.111 to 0.311, occurred in a non-CE-designated course, Create Your Best Life. Similarly, in five out of six courses, students had built more academic ties by the end of the semester.

Table 3 shows that friendship network diameter values decreased or stayed the same in four out of six courses. For example, in Environmental Activism and Strength and Beauty in Mathematics, friendship network diameter increased by 1. Similarly, academic collaboration network diameter values decreased in all six courses except one CE-designated course, Theatre of Ideas.

As shown in Table 4, although some of the CE-designated and non-CE-designated courses managed to lower the average path length in their academic collaboration networks, some academic collaboration networks in both groups showed an increase in average path length values.

Centralization and Importance in the Friendship and Academic Collaboration Networks

Tables 5 and 6 summarize the degree centralization measures of the friendship and academic collaboration networks in the sample courses. Comparing degree centralization measures from the beginning and end of the semester, friendship network degree centralization decreased in five out of the six courses. On average, CE-designated courses reduced their degree centralization by 20%, whereas non-CE-designated courses reduced their degree centralization measures by about 10%. On the other hand, in academic collaboration networks, with two exceptions, degree centralization had increased in both CE-designated and non-CE-designated courses by the end of the semester.

As shown in Table 7, the friendship networks in the CE-designated courses showed an average decrease of 25% in the closeness centralization measure at the end of the semester. In one of the non-CE-designated courses, the friendship network contained some isolates, resulting in unconnected graphs; therefore, we could not report the closeness centrality measure for this network. The existence of academic isolates—that is, people who did not work with others—was also an issue when measuring the closeness centralization of the academic collaboration networks (Table 8). We should note that individuals who were academic isolates at the beginning become connected to the others by the end of the semester in Strength and Beauty in Mathematics.

Table 9 suggests that, on average, both CE-designated and non-CE-designated courses experienced 13–14% decreases in the betweenness centralization of their friendship networks. A CE-designated course, Theatre of Ideas, exhibited a 25% lower betweenness centralization measure for its friendship network at the end of the semester. Table 10 presents betweenness centralization results for academic collaboration networks. Those measures increased by the end of the semester in all courses, with the exception of a 1% decrease in Environmental Activism.

Table 2. Friendship and Academic Collaboration Density Measures at the Beginning and End of the Academic Semester

Course	First phase friendship	Second phase friendship	First phase academic collaborations	Second phase academic collaborations
Create Your Best Life	0.356	0.378	0.111	0.311
Inequality 101	0.309	0.436	0.273	0.364
Be the Change	0.267	0.760	0.124	0.276
Environmental Activism	0.419	0.327	0.236	0.200
Theatre of Ideas	0.257	0.287	0.154	0.228
Strength and Beauty in Mathematics	0.455	0.485	0.182	0.303

Table 3. Friendship and Academic Collaboration Diameter Measures at the Beginning and End of the Academic Semester

Course	First phase friendship	Second phase friendship	First phase academic collaborations	Second phase academic collaborations
Create Your Best Life	4	3	1	4
Inequality 101	3	3	5	4
Be the Change	6	4	4	4
Environmental Activism	3	4	7	6
Theatre of Ideas	7	5	4	5
Strength and Beauty in Mathematics	2	3	4	4

Table 4. Friendship and Academic Collaboration Average Path Length Measures at the Beginning and End of the Academic Semester

Course	First phase friendship network	Second phase friendship network	First phase academic collaborations	Second phase academic collaborations
Create Your Best Life	2.067	1.694	1	2.133
Inequality 101	1.703	1.655	2.127	1.964
Be the Change	2.505	2.105	1.652	2.105
Environmental Activism	1.691	2.036	2.964	2.945
Theatre of Ideas	2.640	2.301	1.611	2.483
Strength and Beauty in Mathematics	1.545	0.755	1.821	2.045

Table 5. Friendship Degree Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase friendship network	Second phase friendship network
Create Your Best Life	25%	36.11%
Inequality 101	23.33%	20%
Be the Change	35.16%	17.58%
Environmental Activism	58.89%	21.11%
Theatre of Ideas	20.42%	17.08%
Strength and Beauty in Mathematics	65.45%	40%

Table 6. Academic Degree Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase academic collaboration network	Second phase academic collaboration network
Create Your Best Life	13.89%	16.67%
Inequality 101	15.56%	41.11%
Be the Change	10.44%	16.48%
Environmental Activism	20.00%	24.44%
Theatre of Ideas	17.92%	16.66%
Strength and Beauty in Mathematics	32.72%	29.09%

Table 7. Academic Closeness Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase friendship network	Second phase friendship network
Create Your Best Life	44.00%	N/A
Inequality 101	N/A	23.44%
Be the Change	47.74%	34.16%
Environmental Activism	68.83%	37.39%
Theatre of Ideas	30.04%	20.69%
Strength and Beauty in Mathematics	77.79%	45.90%

Table 8. Academic Closeness Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase academic collaboration network	Second phase academic collaboration network
Create Your Best Life	N/A	N/A
Inequality 101	23.40%	41.94%
Be the Change	N/A	N/A
Environmental Activism	24.24%	28.63%
Theatre of Ideas	N/A	N/A
Strength and Beauty in Mathematics	N/A	32.91%

Table 9. Friendship Betweenness Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase friendship network	Second phase friendship network
Create Your Best Life	41.51%	29.32%
Inequality 101	16.02%	7.02%
Be the Change	51.92%	34.09%
Environmental Activism	41.06%	30.11%
Theatre of Ideas	44.17%	19.41%
Strength and Beauty in Mathematics	39.67%	32.83%

Table 10. Academic Betweenness Centralization Measures at the Beginning and End of the Academic Semester

Course	First phase academic collaboration network	Second phase academic collaboration network
Create Your Best Life	0%	33.64%
Inequality 101	17.19%	27.94%
Be the Change	5.89%	38.78%
Environmental Activism	42%	41%
Theatre of Ideas	8.59%	42.97%
Strength and Beauty in Mathematics	12.07%	25.62%

Discussion

Community engagement has long been identified as a high-impact practice (Kuh, 2008). Our study was motivated by continued evidence of the value of high-impact practices, beginning with research from the National Survey of Student Engagement (2007) arguing that students should participate in a high-impact practice during their first year of college. Further evidence from Tukibayeva and Gonyea (2014) demonstrated that service learning or community engagement is particularly valuable in supporting student learning. Colleges and universities across the United States have demonstrated their commitment to community engagement through elective participation in the Carnegie Foundation Community Engagement Classification. This designation is earned by institutions who demonstrate use of best practices through continued assessment of student learning experiences (Carnegie Community Engagement Classification, 2021). Research on community engagement shows compelling evidence that courses incorporating community engagement help students build community (e.g., Furco, 1996), communicate more effectively with others (e.g., Vogelgesang & Astin, 2000), and improve their conflict resolution skills (e.g., Moely et al., 2002). In this case study, we examined social networks, particularly friendships and academic collaborations, in courses that employed high-impact practices—namely, first-year courses

that integrated a community engagement project and first-year courses that did not include such a project but focused on the unique needs of first-semester college student.

In our case study, we observed that dedicating a significant portion of class time to community engagement projects did not result in more cohesive friendship or academic collaboration networks. In other words, friendship and academic collaboration networks did not evolve to allow information to spread more easily among students in CE-designated courses as compared with students in courses without the CE designation.

However, while the friendship networks in CE-designated courses did not become more cohesive or close-knit during the semester, our analysis showed that these networks became more equal in the sense that friendship ties were more evenly spread out at the end of the semester. Because the scores in all three centralization measures—degree, closeness, and betweenness—decreased in CE-designated friendship networks, we can conclude that community engagement projects helped reduce power inequalities in friendship networks over the course of the semester. In that sense, we observed that these friendship networks evolved to be egalitarian networks in which students had equal power in spreading information. Such measures indicate a collegial environment within the classroom (Ahn & Rodkin, 2014). This finding aligns with previous research that has demonstrated that CE projects help students become more tolerant and improve their ability to communicate with individuals from diverse groups (Moely et al., 2002; Munter, 2002; Simons & Cleary, 2006).

Our study did not reveal major differences between the evolution of academic collaborations in CE-designated versus non-CE-designated courses. Our data showed that academic collaboration ties increased in six CE-designated courses. Similarly, Teymuroglu (2013) showed that the number of academic collaboration ties increased as students worked together on the CE project.

Furthermore, the current study found that increased academic collaboration creates a group of students who have strategic advantages in academic collaboration networks. As expected, in cases where students chose to work with academically strong students, some students played a key role in the academic collaborations. Those individuals might control interactions or communications among other individuals in the network (Wasserman & Faust, 1994). The betweenness centralization measure is a good indicator of such power inequality. In academic collaboration networks with no isolates, we observed that degree centralization increased in both CE-designated and non-CE-designated courses by the end of the semester. Given that both degree and betweenness centralization decreased in CE-designated friendship networks, we can state that students chose their friends and academic collaborators differently. Similarly, Teymuroglu (2013) reported that students chose their friends and study partners differently.

Finally, an important contribution of this project is the fact that it includes the voice of a student as a researcher. The second author on the project, an undergraduate student, became involved with the project due to its mathematical nature. Reflecting on the project, the student author noted that her involvement gave her the opportunity to learn about novel subjects, collect and compile data, and work through the peer-review process. From the start of the project, the second author took on the task of communicating the intent and process of our research to student participants to ensure that they could give their informed consent. She also communicated with faculty members to learn about community partners and forms of engagement. Communication remained a vital part of the research throughout the project, culminating with the challenge of clearly translating our results—which are based in mathematics—to an audience that may not hold an extensive background in the subject.

This project had several limitations that future research should address. This analysis does not consider the potential impact of the instructor (e.g., the instructor's gender, race/ethnicity, and/or years of experience with community engagement courses) and whether the specific community partner or focus of the community engagement project influenced students' networks. It would be interesting to consider how these, and other demographic variables might influence students' social interactions with both their classmates and community members. Further, this study did not collect data to assess whether students built connections with the members of the community organizations with which they partnered. Future research could use the SNA techniques to map and measure relationships not just between students in the class but also between students and their larger network. This could help us understand the impact of community engagement courses beyond the classroom.

Conclusion

The results of this case study indicated that (a) the friendship and academic collaboration ties in the CE-designated courses did not always result in cohesive or close-knit networks; (b) the cohesion measures did not indicate major differences in the evolution of friendship and academic collaboration ties between CE-designated courses and non-CE-designated courses; (c) the friendship networks in CE-designated courses developed to have evenly spread friendship ties, rather than having a focal group with many friends; and (d) students appeared to choose their friends and academic collaborators differently.

A main contribution of our case study is to promote the use of SNA methods in assessing the influence of community engagement projects on classroom dynamics. These methods provide a different perspective on CE projects that might not otherwise be revealed with surveys, Likert scale measures, open-ended questions, or reflection essays. The present focus on cohesion and centralization of friendship and academic collaboration networks in CE-designated courses can help faculty, staff, and higher education administrators investigate the role of such projects in creating collegial classroom environments and in helping incoming students socially adapt to college.

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Appendix A: Community Engagement "CE" COURSE DESIGNATION FORM

SUBMISSION DEADLINES:

Courses to be offered Spring '20 Term - Deadline is September 23, 2020.

To ensure timely review by the CE Course Designation Approval Committee and placement in appropriate class schedule(s), all proposals must be submitted to the CE course Designation Approval Committee by the dates shown above.

Please also include a rough draft of your syllabus and solidified or potential community partners with contact information.

Department: **Instructor:**

Catalogue Title:

Course Credit (circle): 1 2 3 4 5 6 Semester Hours

Total Contact Minutes Per Week: _____ (excluding breaks)

STANDARDS OF CE COURSES (Courses meeting the standards listed below are considered for the designation of "CE" at Rollins College):

- Identifies and addresses a need in the community (campus, local, regional, or global)
- Meets course objectives and demonstrates a clear connection between the community activity and the course content (theory to practice)
- Involves structured student pre/post reflection
- Involves collaboration with a community organization/agency that is committed to a reciprocal partnership between service and learning
- Allows the community partner to share in classroom dialogue, discussion, and scholarship (when appropriate) including reporting feedback, service project results or research
- Involves a minimum of 15 hours of direct service/research with the community organization/agency
- Involves assignment(s) in which students share their experiences with the class community, the community organization/agency and address a plan for active citizenship beyond the course

PLEASE COMPLETE THE FOLLOWING AS PART OF CE DESIGNATION.
Type into form and save.

Rationale for CE Designation

Description of course (to appear in print, 30 words or less):
Click here to enter text.

What are the goals and objectives of this course?
Click here to enter text.

Practical Application for CE Designation

How would community engagement activities (such as direct service, scholarship, research) enhance student learning and course goals?
Click here to enter text.

How do community engagement activities meet existing community opportunities and/or needs (include name[s] of community agencies that this course will work with)? Please be as specific as possible in sharing nonprofits' information and the needs they've identified.
Click here to enter text.

What activities/projects will students be involved with in partnership with the community (direct service, scholarship, research)? How will the community partner(s) or agencies be involved?
Click here to enter text.

Please identify how students will reflect upon their service experiences throughout the duration of the course.
Click here to enter text.

How will learning be assessed/graded for service-learning or community-based research?
Click here to enter text.

Course Construction for CE Course

Please demonstrate the *significant and ongoing number* of contact hours between students and the community engagement activity. (Please include anticipated number of hours of direct and indirect engagement in projects and activities related to the community for the course—should be no less than 15 hours/student).
Click here to enter text.
How often will this course be offered? __ Every term __ Once a year __ Every other year

How many majors, minors, and nonmajors do you expect to take this course?
Click here to enter text.

What community impact area(s) do(es) your course objective(s), themes, or goals align with? For example: health, education, environment, etc.
Click here to enter text.

Please add any other pertinent information that helps further clarify your interest in CE Designation for this course.
Click here to enter text.
Expectations for CE Course

Courses that are designated as CE include participating in the following:

- CE assessment (both direct and indirect data collection) as coordinated by CLCE
- CE faculty development opportunities (i.e., a workshop, CE mentor program, etc.)

By signing this form, you are agreeing to these best practice guidelines.

Signatures *(required)*:

_____
Sponsoring Faculty Member

_____
CE Course Designation Approval Committee Chair

Author: The Center for Leadership and Community Engagement Office, Rollins College, Winter Park, FL.