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An Analysis of Learning Outcomes in a Freshman Seminar Learning Community that Utilizes Peer Mentoring at a Community College

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Abstract
While there has been research on the effects of utilizing Peer Mentors within Learning Communities with regards to retention data, little research has been done to show the effects that Peer Mentoring has on learning outcomes within a Learning Community. Using anecdotal evidence from peer mentors working within a Learning Community at an urban community college, we describe the effects that individual mentors have had on individual first-semester students. For a preliminary quantitative analysis, a pre post survey was given to two groups of Learning Community students, one group which had peer mentors attached to their Learning Communities (PMLC), and one which did not (non-PMLC). Using an independent t-test, we were able to show that there were some improvements in familiarity from pre to post in both groups and that, in some cases, the PMLC group showed greater improvement than the non-PMLC group, the results were not statistically significant.

Keywords
Peer Mentoring, Learning Communities, First-semester students, First-year experience, Learning outcomes

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Background

Students’ engagement in both academics and campus social activities, such as clubs or programs sponsored by student affairs offices, correlates to a higher chance that they will persist in college (Hu, 2011; Weiss, Mayer, Cullinan, Ratledge, Sommo, & Diamond, 2014; Waldron & Yungbluth, 2007; Popiolek, Fine, & Eilman, 2013; Hotchkiss, Moore, & Pitts, 2006). Despite this, community college students may not think that community engagement is an important factor in their learning process. Parker (2016) found that “few students see community as a particularly salient component of their lives at this time (p. 20)”. In his theory of involvement, Astin (1999) suggested that the involvement of community college “students seems to be minimal. Most (if not all) students are commuters, and a large proportion attend college on a part time basis (thus, they presumably manifest less involvement simply because of their part-time status)” (p. 92). Given this, learning communities taught in community colleges are especially challenged to seek ways to encourage students to engage in campus-social activities and to perform well academically (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).

This article describes our effort to measure the impact of incorporating peer mentoring as a strategy to address this challenge. Outside of the context of a learning community, there is evidence to suggest that students who have peer mentors embedded within their courses perform better in the class (Goff, 2011) and also report greater satisfaction with the learning experience (Smith, 2008). It is well established that peer mentoring can encourage students to connect with social activities on campus. Rieske and Benjamin (2015) found that one of the “most universal” expectations of peer mentors is that they work to get their mentees engaged with the community. A peer mentor’s role may include different tasks, depending on the institution, but in general, peer mentors are described as role models whose experience and wisdom guides students during their transition to college, both academically and emotionally (Rieske & Benjamin, 2015).

However much we know about peer mentors, little scholarly information exists concerning how they affect learning communities. A few studies examine how peer mentoring in learning communities affects retention. For instance, at Bunker Hill Community College, students who are enrolled in a learning community that includes a peer mentor are more likely to be retained the following semester than the general population of students and their counterparts in Learning Communities that do not use peer mentors (Cerna, Platania, & Fong, 2012). At Cabrini College, students enrolled in their Living and Learning Community (LLC) program, which uses peer mentors, were retained at a higher
rate than the non-LLC students (Gebauer, Watterson, Malm, Filling-Brown, & Cordes, 2013).

Most of the research on peer mentoring in the context of a learning community, however, focuses on the benefits to the mentor. For instance, Snyder and Wiles (2015) found that peer leaders improved their own critical thinking skills and retention. Monte, Sleeman, and Hein (2007) found that the secondary benefit of peer mentoring is that the mentors experience higher retention rates and GPAs. Because peer mentors have personal contact with faculty and staff, they understand campus resources and career development (Monte, Sleeman & Hein, 2007). Also, through mentoring activities, the peer mentors experience personal satisfaction (Yusta-Loyo, Cepero-Ascaso, Prieto-Martín, Abadia-Valle, & Bueno-García, 2014).

**Peer Mentors in Kingsborough’s Opening Doors Learning Communities**

Although the practice varies, peer mentors typically engage with the students that they mentor in an attempt to ease the mentee’s transition to college, (Rieske & Benjamin, 2015). Since community college students have to balance many different obligations, they may view engagement with the college community as less important (Hill, 2016), a problem that makes the peer mentor’s attempts to engage the student become all the more important. As peer mentors at the community college encourage their students to engage in campus activities, such as service learning, they also model the benefits of participating in the civic life of their community (Lovett & Chi, 2015). In general, peer mentors are supervised by program staff and are trained on leadership development, communication skills, and interventions (Rieske & Benjamin, 2015). Many peer mentors in learning communities draw upon the experiences that they had being mentored to help them fulfill the role (Benjamin, 2007), and many programs require that peer mentors have participated in a learning community (Rieske & Benjamin, 2015).

At Kingsborough, peer mentors are assigned to ten of the 25 to 30 Opening Doors Learning Communities offered per semester. These peer mentors were previously enrolled in one of the Opening Doors Learning Communities, which typically link an English course to a first-year seminar course. In most Opening Doors Learning Communities, a general education course is also included. The learning communities are offered as an option to all incoming students, and each enrolls between 23 to 27 students. Opening Doors peer mentors are required to attend eight hours of training prior to the start of the semester. This training—usually done over two days with half hour sessions scheduled within a four-hour training block—focuses on confidentiality, counseling techniques, stress management, and campus resources. Sessions, which are typically led staff from
the Department of Student Affairs, focus on exposing the peer mentors to the services available on campus. Usually, the peer mentors will attend sessions led by the Office of Student Life, the Office of Personal Counseling, the Student Wellness Center, the Offices of Career and Transfer Services, and the Student Conduct officer. Other training sessions, led by case managers from Opening Doors, focus on issues of maintaining student’s confidentiality, balancing being a peer mentor with being a student, and learning to work as a team. More experienced peer mentors, called Senior Peer Mentors, lead some sessions dealing with skills for connecting with mentees.

Once the semester begins, the mentors are assigned to work within the first-year seminar course, attending each session and assisting the case manager in the class. Each mentor is assigned to work with only one learning community, ensuring that he or she has a caseload of no more than 27 students. The mentors organize groups of students to attend campus events, maintain social media groups to share information about campus events, help the students organize study groups, and advise the students one-on-one about campus clubs or activities that they may be interested in. The peer mentor is supervised by the case manager, with whom the mentor meets weekly, and, more broadly, by the coordinator of the peer mentoring program for Opening Doors. All mentors meet as a group monthly to refresh their training and to iron out any issues that they are experiencing. The peer mentors are compensated in one of two ways: either they are paid for four hours a week by the Vice President for Student Affairs’ office, or they receive one academic credit through an internship course.

Kingsborough’s First-Year Seminar course in Opening Doors LC covers material relevant to the transition to college, including study skills, use of college resources, information literacy skills, college policies, career counseling, and personal reflection. While there are some stand-alone sections of this course, the majority of the First-Year Seminar courses are located within either an Opening Doors or ESL Learning Community. The seminars are taught by Student Affairs professionals, who act as case managers, serve as the academic advisors for the students within the learning community for the first year, and supervise the peer mentor assigned to the seminar. While the peer mentor provides social support for the students, the case manager focuses on academic support, advising students on required course sequences and major requirements, and referring them to appropriate support services.

A Study on Peer Mentoring

Problem Statement

Prior to adding peer mentors, we assumed that students in the first-year seminar course would be self-motivated to engage in campus activities, and that is
how we planned the curriculum. As a result, we didn’t incorporate concrete activities into the course curriculum to support student participation. For instance, the first-year seminar course curriculum did not have any specific lessons or workshops to ensure students gained a deeper understanding of the college’s extracurricular activities on campus. By incorporating a peer mentor component into the first-year seminar course and specifically asking the mentors to help the students engage with these programs and activities, we had hoped that the students enrolled in the learning communities would engage more with the campus services and activities.

**Quantitative Analysis**

For this study, we used the data from the fall 2015 semester of a survey that is given to all students in the first-year seminar course within an Opening Doors Learning Community. This survey was developed by the Department of Student Affairs and has been used for several years. The survey consists of 30 questions asking how familiar the students are with each item listed, as follows: (1) I am not familiar with this area; (2) I am somewhat familiar with this area; and (3) I am very familiar with this area. One additional question asks if the student would recommend the first-year seminar course and to give a reason why or why not. The survey is given twice: a pre-survey that is administered in the first class and a post-survey that is administered in the last class. By comparing the pre and post-surveys, we can determine whether students report that they know more about the items on the survey at the end of the semester than they did at the beginning. In all areas, fewer students report that they are unfamiliar with the area on the post survey than on the pre survey.

Since the peer mentors’ primary job is to help connect students to college resources, events, programs, and the campus community, we chose to focus on three sections of the survey related to these items. The College Resources section asks the students how familiar they are with support services such as Personal Counseling, Tutoring, the Single Stop center, Student Life, and Veterans Services. The Extracurricular Activities section asks about the students’ familiarity with Student Government, Clubs, and Athletics. We also included the Career and Transfer Exploration section because it asks how familiar students are with specific major events such as Job/internship fairs, transfer information and college fairs, and Major Fair. The other sections (Academic Requirements, College Policies, and Information Literacy Skills) were excluded because the material they cover is primarily taught by the case manager or, in the case of Information Literacy Skills, a librarian visiting the first-year seminar course class.

**Research Question and Hypotheses**
For the study, we developed three hypotheses in response to our research question, Will students enrolled in a Peer Mentor Learning Community (PMLC) be more familiar with on campus events and activities at a statistically significant rate than students enrolled in a Learning Community that does not use peer mentors (non-PMLC)?

1. Students in a PMLC will be more familiar with College Resources at a statistically significant rate than students in a non-PMLC.
2. Students in a PMLC will be more familiar with Extracurricular Activities at a statistically significant rate than students in a non-PMLC.
3. Students in a PMLC will be more familiar with Major events related to Career and Transfer Exploration at a statistically significant rate than students in a non-PMLC.

Design

Two groups were examined for this study: learning community students with a peer mentor in their Student Development course (PMLC) and learning community students without a peer mentor in their Student Development course (non-PMLC). Only information pertaining to pre- and post- survey and whether or not they were in a peer mentor learning community was provided. Other information, such as demographics, age, or major, was not on the surveys.

We selected an independent t-test to test the hypothesis that the learning community students with peer mentors (PMLC) would become more familiar with college resources, career and transfer information, and extracurricular activities, when compared to learning community students without peer mentors (non-PMLC). We ran three separate independent t-tests on each of the three categories’ post-survey data for both groups. The data was collected in the learning community first-year seminar component, so it was assumed that both groups would improve (Beachboard, Beachboard, Li, & Adkinson, 2011). The study included 282 participants—124 PMLC and 158 non-PMLC. A pre-survey was distributed to both groups at the start of the fall 2015 semester, and a post survey was then distributed to both groups at the end of the fall 2015 semester.

To determine the effectiveness of peer mentors within a learning community, survey answers from the two independent groups’ (PMLC and non-PMLC) were compared. Those responses were sub-divided into three sets based on the students’ level of familiarity for eleven questions pertaining to their knowledge about particular resources and information at their college (See Appendix A). The data collected from the three survey categories—college resources, career and transfer information, and extracurricular activities—were examined using independent t-tests to determine whether the means score was the same or different for the group with peer mentors and the group without peer mentors. The researchers wanted to ensure that all participants were equally
familiar with the information at the start of the first-year seminar course. Therefore, frequencies were run to determine the level of familiarity and determine that the students were equally not familiar or somewhat familiar with the eleven survey questions at the start of their fall term (See Figures 1 and 2). The pre- and post- surveys were distributed in class during the first-year seminar class at the beginning of the semester and the end of the semester. No post surveys were collected once the semester ended.

Figure 1: Percentage of students in a PMLC who stated they were not familiar with College Resources, Extracurricular Activities, and Career and Transfer Exploration.

Figure 2: Percentage of students in a non-PMLC who stated they were not familiar with College Resources, Extracurricular Activities, and Career and Transfer Exploration.
The research method also included qualitative feedback. The feedback was gathered through one-on-one interviews between the researchers and the peer mentors immediately following the end of the fall semester. These interviews gave peer mentors a chance to reflect and have a thorough conversation about their personal experiences and insights into the effectiveness of their role as a peer mentor. In addition, some of the peer mentors wrote reflections on their experiences and published them on a public blog dedicated to issues surrounding peer mentoring. Some of these writings provide insight into the impact the peer mentors had on their students.

Results

Do the Mentors Make an Impact?

Mentors differ from case managers by connecting individually with the students. In order to start their work, mentors have to convince the students to come to them, and that requires building trust. This process can begin as peer mentors serve the important social function of introducing mentees to the campus and its resources. For example, one peer mentor, Justyna, was working in a learning community that contained an Anatomy and Physiology class. This class is challenging, and it is very important for prospective Allied Health majors to earn a good grade. Justyna had taken the class before, and so she used her experience to recommend to her students not only that they should go to the tutoring center for help with the course but also that they should work with a specific tutor whom she knew was helpful. Other peer mentors, like Robert, Daniel, and Kemoy, offered to personally introduce their students to clubs and organizations that they belong to on campus, such as the Honors program, the Radio station, or the LGBT club. Creating an environment of trust is particularly essential at an urban community college like Kingsborough. In his discussion of Reality Pedagogy (which emphasizes peer-to-peer co-teaching), Christopher Emdin (2016) writes, “If we are truly interested in transforming schools and meeting the needs of urban youth of color who are the most disenfranchised within them, educators must create safe and trusting environments that are respectful of students’ culture.” We know that college students trust leaders who have “a caring, understanding, competent, honest, and open leadership style” (Martin, Naylor, Jefferson, David, & Cavazos, 2015). In the words of peer mentor Daniel, “I want them to know that if they need someone to talk to or they just want to ask someone a question they can come talk to me and they feel comfortable with that.”

The peer mentors have worked to do this within their learning communities, and many have stories about the ways that they have worked to make a difference to the students they mentor. In a post on the blog, peer mentor Fernando wrote
about a student whom he helped. The student was struggling with one of his classes, particularly with motivation, and Fernando talked with him, encouraged him, and helped him connect to the campus community. Fernando wrote that:

I told him of my struggles and my hurdles that I had to deal with, and afterwards I started to explain to him that those struggles weren’t a mountain of a hurdle, they are something that he could confront. He had to focus on overcoming the hurdles if he wanted to get to fulfill his goals and aspirations. But one thing that I was glad that he asked me right after our conversation was, “As my mentor, can you help me be better than what I am now?” I responded, “I had a feeling you were going to say that. I would be honored to” (Gomez, 2016)

Fernando encouraged the student to become a part of the student government’s Business Council, which connected nicely with the student’s business major. This ultimately helped the student turn things around, pass the class, and become more engaged on campus, eventually becoming a peer mentor himself. According to Fernando, “he became my protégé and one of my first co-mentors, and I’m happy to say that he has changed so much since that semester” (Gomez, 2016). By encouraging his student to connect with resources and the community, Fernando helped inspire his student to do better in class and persist.

Other peer mentors have stories about building trusting relationships with their mentees. In his interview, Terell reported that he had a student who “started off the semester joking, talking a lot in the class with a couple other classmates.” Terell spoke with the student one-on-one about his observations and his own experiences: “I told him some lessons learned, some mistakes that I’ve been through in life, and just over a period of time, I’ve seen that he stopped jumping around and he stopped doing certain things in class, and he’s still enrolled in college today, and he’s doing well.” Again, by setting a positive example and connecting with his student, the mentor was able to help the student persist in the class. Terell also spoke about a student coming out to him. When the student discussed the challenges he was facing, Terell brought him to the counseling center. In order to further support the student in their future interactions, Terell also sought out training from the campus’ Safe Zone organization, which works to support LGBT students.

Peer mentor Robert, during his interview, spoke about how he worked to help one of the students he mentored. Robert got in a cab and went to sit and counsel the student, suggesting on-campus resources that might help her with her situation. It is interesting to note that when Robert’s student called him, the semester had already ended, but Robert felt it was important to continue to work with her as a mentor. In his words, “I don’t want that relationship to end when the class is over because I don’t want them to feel like, all right, I was here for their freshman semester.” Robert does not want his students to believe that his interest
in helping them was simply because of his job, but rather because he genuinely cares about improving their transition to college.

Terell, Robert, and Fernando’s stories illustrate an important part of the peer mentor’s role: that of a trusted student leader. Research demonstrates that “caring and communication, as well as role modeling, become crucial to the needs of emerging student leaders in the pursuit of a trusting environment” (Martin et al., 2015). For student leaders to be effective at their job, they must be trusted by the students they lead. One of Robert’s mentees, Evans, later became a peer mentor himself. In reflecting about his experience having a peer mentor, Evans stated:

At first, it seemed unnecessary. I’d say to myself that I could handle this on my own—that I didn’t need anyone’s help. As the semester went on, although I kept telling myself I could do this alone, things just got harder. Then it made sense to turn to the closest person I could for help, and that was my peer mentor. Providing me access to computer labs to print papers and projects, tutoring sessions which many take for granted, it helped tremendously.

In Evans’ case, having a peer mentor who was knowledgeable about campus services helped him to handle a challenging point in his semester.

The peer mentors’ role was to become the link between the students and the campus resources. They connected with their students’ and through those relationships and interactions helped the students become overall more confident and comfortable with asking questions about campus resources and activities. These relationships and interactions gave the students a designated person to reach out to about college life. If students were not as willing to inquire about resources, the peer mentors would actively seek them out to inform the students about resources available and to invite them to take advantage of specific opportunities.

From these stories, we can infer that the peer mentors are indeed making a difference in the lives of individual students within the learning community. They are able to point individual students to campus resources, and they are positive role models to the students they work with closely. However, to see what kind of large-scale impact the mentors may have on student Learning Outcomes requires a quantitative analysis.

**Quantitative Findings**

Because we were only able to use data from one semester, the quantitative results are hardly conclusive. However, when taken as a preliminary analysis, the results hint that having a peer mentor in the first year seminar may have a small, albeit not significant, effect on the students’ familiarity with categories studied.
The first category examined was the college resources. The independent t-test conducted produced $t(277) = -1.18$, $p = .237$. The results show that $p > .05$ and thus, the researchers failed to find support for the research hypothesis that the PMLC group would become more familiar with college resources than the non-PMLC group. The overall findings concluded that both groups were more familiar after one semester with college resources. The findings were not surprising because the assumption was made that the students in a student development course would ultimately become more familiar after one term with college resources.

The second category examined was extracurricular activities. The researchers ran an independent t-test to determine whether or not the PMLC group was more familiar with the college’s extracurricular activities than the non-PMLC group. The results of the independent t-test produced $t(276) = -.289$, $p = .146$. The results indicated that $p > .05$ and thus, the researchers failed to find support for the research hypothesis that the PMLC group would become more familiar with extracurricular activities than the non-PMLC group. Both groups were more familiar after one semester enrolled in the Learning Community First-Year Seminar course. The students in the PMLC group were slightly more familiar, but the difference was not statistically significant enough to reject the null hypothesis.

The last category explored was familiarity with career and transfer student resources. Once again, the researchers selected an independent t-test to determine whether or not the PMLC group was more familiar after one semester than the non-PMLC group. The findings determined that $t(273) = -.810$, $p = .419$. The results show that $p > .05$. Based on these findings, the researchers failed to reject the null hypothesis that there is no statistically significant difference after one semester enrolled in the Learning Community first-year seminar course. Both groups became more familiar with career and transfer resources.

One of the obvious findings was that overall learning community student development courses are impacting students’ familiarity with college resources, career and transfer, and extracurricular activities. This was the same for both groups. There was little to no gap between the two groups familiarity after one term. The learning communities program clearly helps in obtaining ideal learning outcomes.

Limitations and Proposal for Future Research

Researchers limited their data to the fall 2015 survey data because prior to that term only one or two learning communities used peer mentors. Beginning in fall 2015, six learning communities used peer mentors, and so the sample size was larger. As the program continues, and more semesters worth of data become available, a clearer picture will emerge.
Another limitation was that the first-year seminar course is available only for learning communities; therefore the researchers were not able to compare the survey results with a non-learning community group.

An additional limitation for this study was that the data collected came from a self-reported survey. There is no basis to evaluate whether or not the students who claimed to be more familiar were actually more knowledgeable and utilizing the resources, pursuing career and transfer options, or attending campus events and extracurricular activities.

While exploring the effectiveness of peer mentors in learning communities, the researchers suggest a longitudinal study to determine patterns in the effectiveness of peer mentors over the course of multiple semesters. Future research regarding first-year seminar learning outcomes could be investigated for first-year seminar courses within learning communities and first-year seminar courses that are not within learning communities.

Meta research across studies that included a large sample from a variety of institutions and LCs could provide a more substantive picture of peer mentoring. Further, a meta study could be useful for comparing LC and non-LC students.

**Conclusion**

As predicted, there was improvement from pre to post in both PMLC and non-PMLC groups. However, the improvement for PMLC group was not statistically significant when compared with the non-PMLC group. Despite its lack of statistical significance, peer mentoring has been observed and used at Kingsborough effectively to help individual students within the learning communities and become a valued aspect of first-year seminar courses. The researchers believe that mentoring is an additional tool that can be used to support the overall learning community and, as a correlate, that the learning community has proven to have statistically significant effect on the learning outcomes. By itself, the effect of using peer mentors in the first-year seminar course on Learning Outcomes is small, but it can be combined with other high impact practices within first-year seminar course to affect these outcomes.

What the findings indicate is that peer mentors are useful as an additional resource in the learning community program. The goal of utilizing peer mentors in the first-year seminar course is to diversify the way information regarding college resources, extracurricular activities, and specific campus events related to the career exploration process is presented to students. Before mentors became a part of our learning community program’s first-year seminar course there was no effective way to address the variety of student interests and concerns. Creating a student engagement tool, such as peer mentoring, helps students become more familiar with the college. As research suggests, (Kuh et al., 2008; Hu, 2011),
students who are more engaged and connected to the college will be more likely to persist.

References


