Peer Mentoring Effects on Retention of At-Risk Students on Academic Probation

Buck Blankenship
Lecturer
First-Year Experience Program
Northern Arizona University

Paul Deasy
Research Analyst
Undergraduate Retention
Northern Arizona University

Cody Canning
Director
First-Year Experience Program
Northern Arizona University

Introduction

Peer mentoring is a common retention strategy at many universities. The current study is a quasi-experimental mixed methods investigation in to the effects of a peer mentoring program for at-risk, first year probationary students in a mandatory course.

Peer mentors held weekly, 30-minute meetings with each student, provided support, discussed student challenges, and navigated students to resources on campus as needed. Two treatment groups (weekly and bi-weekly peer mentoring) and no peer mentoring group were compared to measure differences in GPA and retention data (Figure 1). In addition, qualitative responses from the peer mentors was collected.

Hypothesis

More frequent peer mentoring treatments would result in higher retention rates due to increased social integration from the peer meetings.

Sample

130 participants, of which were male (52.3%) and female (47.7%). Participants ethnicity were White (50.8%), Hispanic (26.2%), African-American (1.5%), Asian or Pacific-Islander (3 %), Native American (7%), another ethnicity (5.4%), and not reported (2%).
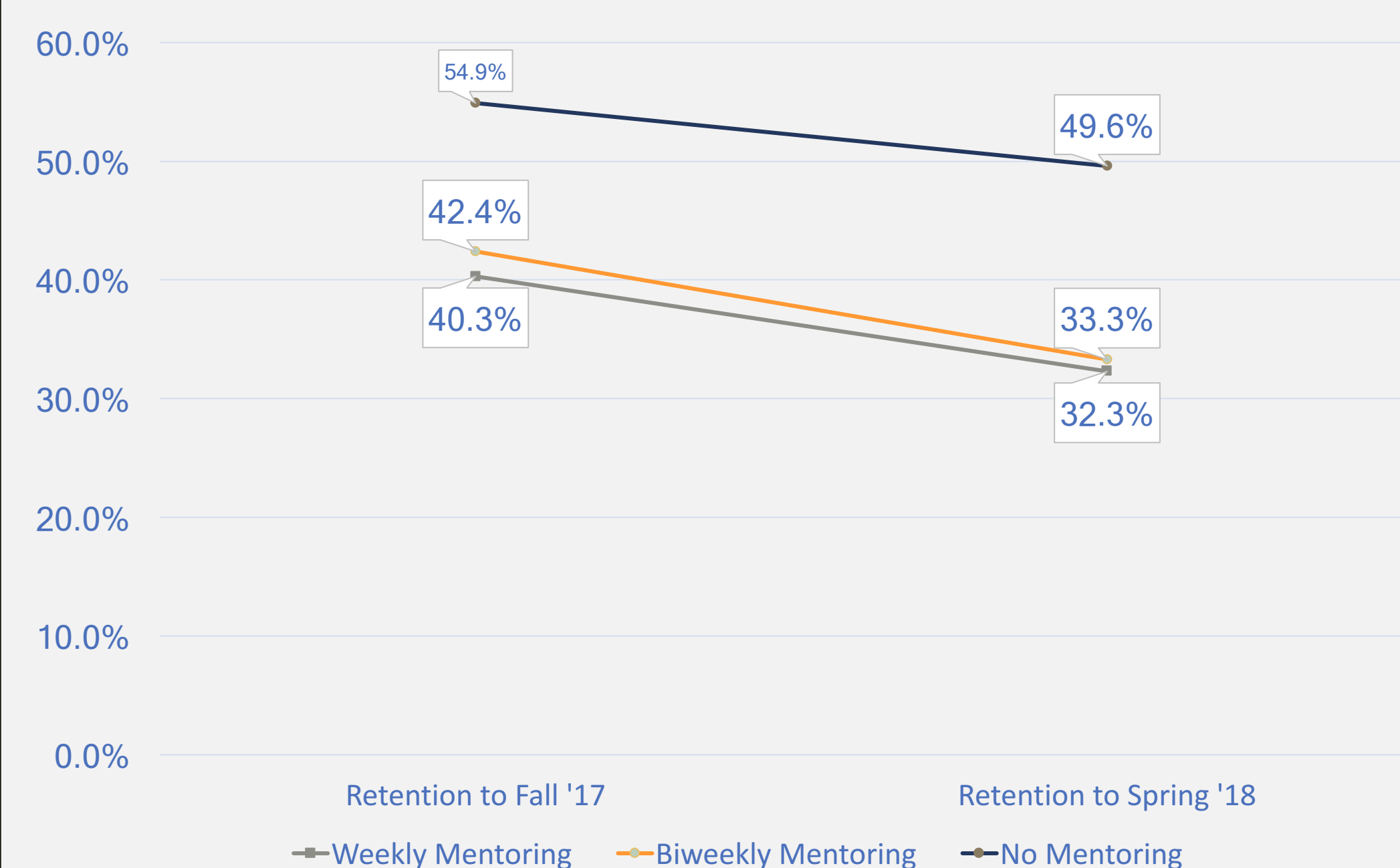
29 peer mentors were recruited to complete an open-ended questionnaire.

Figure 1: Research Design
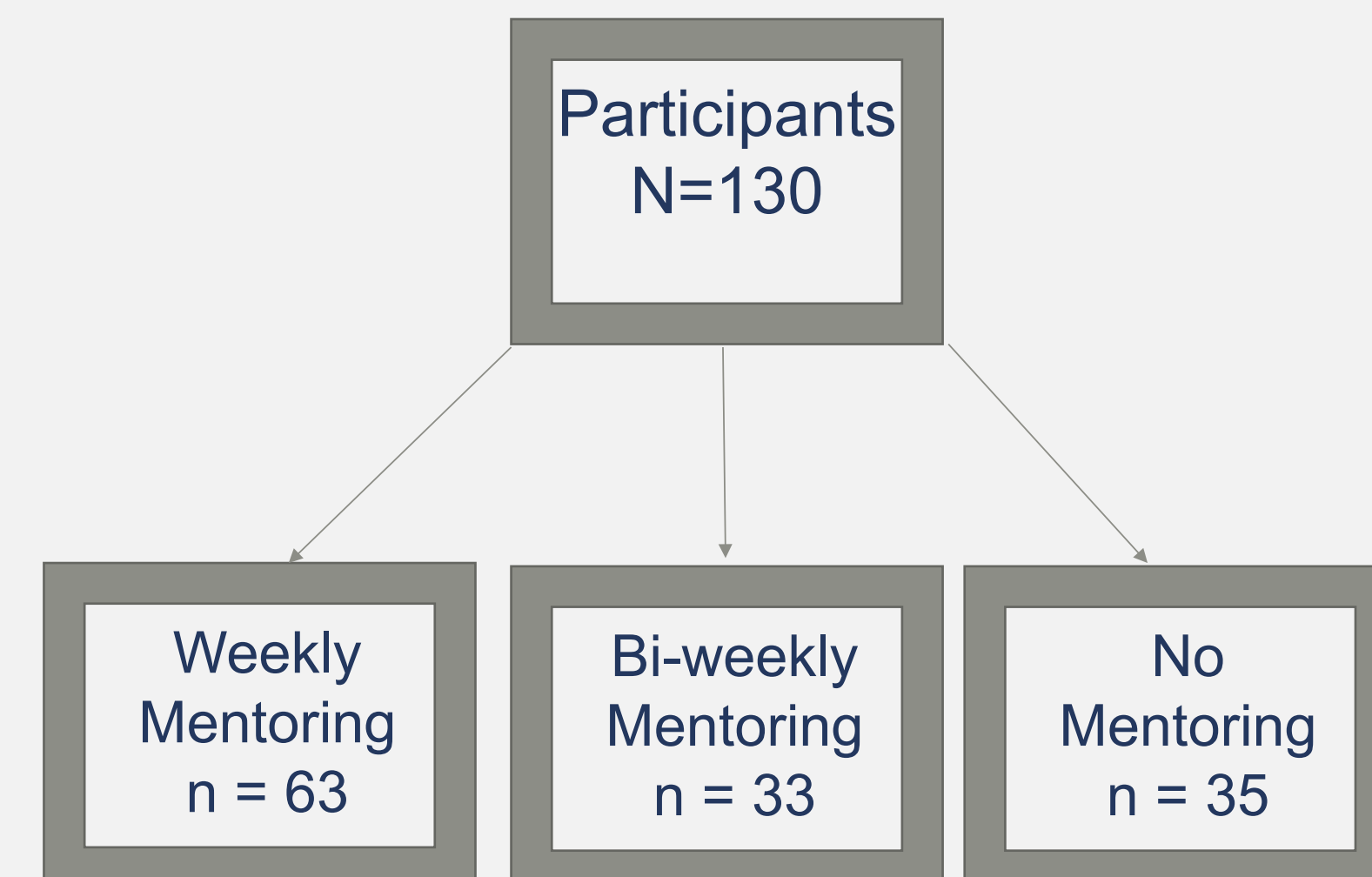
Participants N=130

Weekly Mentoring n = 63 — Bi-weekly Mentoring n = 33 — No Mentoring n = 35

Two treatment groups (weekly and bi-weekly peer mentoring) and no peer mentoring group were compared

Figure 2: Retention Rates by Weekly Mentoring, Bi-weekly Mentoring, and no Mentoring

Methods

An entropy balancing matching method was used to control for the following confounding factors: total enrolled hours, first semester GPA, gender, residency, first generation, low income, and student of color. Ordinary least squares regressions were used to identify differences in students' end of term GPA. Logistic regressions were then conducted to identify the association between mentoring and retention to the 2017 Fall semester and Spring 2018 semester (Tables 1 - 3, Figure 2).

Peer mentors responded to the prompt: "Given the frequency of the appointments with your students, offer a brief reflection of your experience". Responses were inductively coded by two researchers as positive experience or negative experience for participant (Figure 3).

Tables 1- 3: Comparing Mentoring Treatments

Weekly Mentoring vs. No Mentoring					
	Weekly Mentoring (n=62)	No Mentoring (n=35)	Difference	Odds Ratio	P-value
End of Term GPA*	2.02	2.47	-0.45		0.03*
Retention to Fall '17 Semester	40.3%	54.9%	-14.6%	0.56	0.27
Retention to Spring '18 Semester	32.3%	49.6%	-17.3%	0.48	0.18

Bi-weekly Mentoring vs. No Mentoring					
	Biweekly Mentoring (n=33)	No Mentoring (n=35)	Difference	Odds Ratio	P-value
End of Term GPA	2.18	2.41	-0.23		0.29
Retention to Fall Semester	42.4%	50.1%	-7.7%	0.74	0.54
Retention to Spring Semester	33.3%	48.3%	-15.0%	0.54	0.22

Any Mentoring vs. No Mentoring					
	Any Mentoring (n=95)	No Mentoring (n=35)	Difference	Odds Ratio	P-value
End of Term GPA*	2.08	2.43	-0.36		0.05*
Retention to Fall '17 Semester	41.1%	52.9%	-11.8%	0.62	0.30
Retention to Spring '18 Semester	32.6%	48.1%	-15.5%	0.52	0.17

Figure 3 : Mentor's Responses

Prompt: "Given the frequency of the appointments with your students, offer a brief reflection of your experience".

Mentors Responses		
Weekly Mentoring	18 responses	100% Positive Experience
Bi-weekly Mentoring	11 responses	100% negative Experience

Weekly mentoring example: "Many of my students even expressed to me that they liked coming every week because it was a good motivator to get their work done and have extra support."

Bi-weekly mentoring example: "[Bi-weekly mentoring] was very detrimental I believe to the coaching experience on both ends. It was more difficult for me to build rapport with my students."

Two researchers inductively coded responses as positive experience or negative experience for mentees. Interrater coding reliability was 100%.

Conclusions

The results indicate that peer mentoring in any model did not have a positive impact on students' GPA or retention data. Bi-weekly mentoring was found to be the most ineffective treatment. Additionally, peer mentors reported the bi-weekly mentoring model to be deleterious for student relationships. These findings did not support our hypothesis. We suggest that the compulsory nature may have undermined the intentions of peer mentoring, and infrequency bi-weekly meeting model may have contributed to the probationary students' ineffective time-management, ultimately leading to lower academic performance.

Based on these findings, the study design was modified to remove the bi-weekly mentoring and continued for two more semesters with new participants.

NAU NORTHERN ARIZONA UNIVERSITY