



Effects of a Mentorship Program on High-Need College Students: Reflections from Mentors and Mentees

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Abstract

On average, the college graduation rates for minority and/or high-need students are generally low. To address this situation, a Mid-Atlantic Consortium recently secured a grant to improve 4-year graduation rates of high-need students (i.e., new first-time students and transfer students who qualify as low-income students, first-generation college students, adult students, and/or students of color) by 20% over each selected college's baseline. The purpose of this qualitative case study was to explore the experiences of students and faculty mentors toward accomplishing this goal. Data were transcribed, coded, and analyzed thematically. Some of the effects identified in this study included enhanced academic and career planning, strengthening relationships between mentors–mentees through enhanced communication and trust building, enhanced research skills, development of mentorship skills, development of intellectual curiosity, and improved academic outcomes. We discuss implications for practice, policy, and further research.

Keywords: *mentoring, high-need college students, faculty, mentor, mentee*

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Introduction

Mentoring in higher education is necessary to enhance students' academic performance and increase graduation rates. Students who are well mentored feel more connected, motivated, and assiduous and often graduate earlier than their counterparts (Hoffman, 2014). According to Hagler (2023), first-generation college students (i.e., those without a college-educated parent or guardian) often “face a range of practical and psychological barriers to completing their degrees” (p. 3104). Historically, they are underrepresented, underserved, and are often from low-income and/or marginalized families. Also, they are usually the first in their families to receive a college degree (Hagler, 2023; Monjaras-Gaytan & Sanchez, 2023).

A Mid-Atlantic Consortium secured a development grant in 2015 from the First in the World (FITW) competition to improve 4-year college graduation rates of minority and/or high-need students by over 20% among the five partnering institutions of higher education, including Newtown University. The consortium anticipated that students' grades and graduation rates would improve significantly among the partnering institutions.

The freshman students selected for the Research Aligned Mentorship (RAM) program met one or more of the following criteria: new first-time students and transfer students who qualified as low-income students, first-generation college students, adult students, and/or students of color. The RAM faculty mentors were full-time Newtown University professors representing all the schools at the university. Students were paired with a mentor who was either in their major field of study or a closely related field, (i.e., a psychology major student paired with a psychology professor). In this study, the terms RAM student and RAM mentee were used interchangeably, as were RAM faculty mentor, mentor, and professor.

One of the primary foci of the RAM program was to increase the rates at which historically underrepresented students in American higher education experience academic success and persistence. As of the beginning of the fall 2019 semester, 14 of the 20 RAM transfer students, who were selected only from the initial fall 2016 class, have completed their studies and were awarded a 4-year degree. The process of the RAM program entailed connecting selected Newtown University students with special faculty mentors to develop a professional relationship to guide the student's academic progress. The mentor was someone the student could rely upon for academic support, internship guidance, research experiences, and a host of other professional development activities. The goal and purpose of this qualitative study was to understand the perceptions of the stakeholders (i.e., mentees and mentors) regarding the impact of the program.

The word mentorship refers to the relationship between a more knowledgeable and/or experienced person (i.e., the mentor) and a less knowledgeable and/or experienced person (i.e., the mentee). The fulcrum of the relationship between mentor and mentee is predicated on effective guidance and support toward learning. According to Sweeny (2008), "Mentoring is the complex developmental process that mentors use to support and guide their protégé through the necessary transitions that are part of learning" (p. 2).

Background

The RAM program at Newtown University was one of the major initiatives established in 2016 by the former administration to determine whether direct student engagement with faculty would increase the academic performance and graduation rates of historically underserved students. This program, modeled after one implemented in the 1970s at a large research institution to address the needs of less selective public universities, was modeled after one implemented in the 1970s at a large research institution (Kahn, 2015).

According to Kahn (2015), a major goal of the RAM program was to connect students who historically have underperformed academically with meaningful research and practical application opportunities. Each partnering higher education institution was required by the grant to develop creative ways to connect RAM students to mentored research experiences. Regardless of their major, the Newtown University RAM program provided students with extra benefits and rewards that would enhance learning and give RAM scholars opportunities not available to other students. The overarching goal was to ensure RAM students graduated in the minimum amount of time possible. Beginning with the fall 2016 semester and continuing for each of the following two fall semesters (2017 and 2018), a new cohort of 100 first-year students was randomly selected for participation in the RAM program from the master list of students admitted to Newtown University's baccalaureate degree programs.

The current project sought to better understand the mentoring relationship experienced by the RAM faculty mentors and RAM students. In this study, the Homans exchange theory (1958) was used as a guide to better understand the mentoring relationship. Young and Perrewé (2000) assert that,

Exchange theory most clearly lays the theoretical foundation for understanding the interaction or exchange that takes place in mentoring relationships. Social exchange is based on the premise that within the context of social interaction, there is a giving and receiving of tangible and intangible costs and benefits. Further, individuals participate in and maintain social interactions with individuals with whom benefits of the interaction outweigh costs and people will seek to maximize their position in relation to others. Thus, individuals want not only to gain more benefits than costs, but seek to gain more benefits than others. (p. 191)

The key element from Homans exchange theory in relationship to the RAM program involved the “giving and receiving of tangible and intangible costs and benefits” (Young & Perrewé, 2000, p. 191) as this research sought to understand whether there were any aspects of the lives of the stakeholders that affected the quality of the mentoring relationship that could be developed. According to Dillman et al. (2014), social exchange theory is the theory that “people are more likely to comply with a request from someone else if they believe and trust that the rewards for complying with that request will eventually exceed the costs of complying” (p. 24).

Problem Statement

Low graduation rate is a chronic problem in most public colleges and universities with a large concentration of minority and/or high-need students. According to Lenz (2014), “The U.S. Department of Education indicated that approximately 21% of students enrolling in universities do not finish their degree within 6 years” (p. 195). The Mid-Atlantic Consortium secured a development grant in 2015 with which it was able to launch the RAM program across the five partnering public institutions of higher education, including Newtown University. The goal of the RAM program was to improve students’ academic performance and graduation rates by 20% (Kahn, 2015). The main question answered in this study was: “What has been the impact of the mentorship program on students’ academic performance and graduation rates?”

Literature Review

Five key themes emerged from the literature review, each having relevance and implications for this study. These included student needs and issues, advising and mentoring strategies, understanding of institutional processes and procedures that assisted or hindered faculty mentors in their work with students, faculty training, and leadership in higher education.

Student Needs and Issues

Students’ needs and issues can include expectations about what topics would be discussed with mentors and updating any action plans or other issues as determined by student needs. Concerning advising in general, Anderson et al. (2014) state that “students were dissatisfied with three primary aspects of their interaction with their academic advisor: not having enough time to visit, not receiving proper direction, and not experiencing effective communication” (p. 31). Faculty members at many universities often face high demands on their time and this may result in lowered quality of mentoring or advising for the students they see. This might result in lowered student expectations of the interaction and, consequently, lower interest in developing the mentoring relationship. By ensuring that students receive quality advising and mentoring, mentors can assist with developing a lasting and meaningful professional relationship.

Advising and Mentoring Strategies

An important theme that emerges from the mentoring literature is an understanding of the best practices for student mentoring. These strategies and techniques can be refined to better prepare faculty mentors to meet student needs by developing professor competence in mentoring. DeAngelo et al. (2016) argued that “key components include relationships that provide (1) multiple types of assistance; (2) support in career development, psychosocial and cognitive outcomes, and role modeling; and (3) mutual and personal relationships” (p. 319). This triad of ideas may provide the foundation needed for effective mentoring that could meet student expectations. It is important to make a distinction between mentoring and what is typically considered academic advising. Mentoring requires a substantial investment in the student’s personal and professional growth. This involves more than what coursework a student should take but delves deeper into discussions of internships, career planning, and post-graduation plans. This notion is further explored by Anderson et al. (2014) in their description of prescriptive and developmental advising strategies, in which they suggest that developmental advising encompasses the whole student to take into consideration and support the student’s campus engagement and various employment opportunities and to serve as a contact who the student feels comfortable speaking with on a variety of social-emotional topics. The distinction between these two “levels” is critical for understanding the best practices for faculty mentoring of undergraduate students. Mentoring is a step above and beyond what is normally perceived as college academic advising.

The main purpose of seeking out a mentor is to assist an individual in the career planning and development process. To further develop the delineation between the academic advisor and mentor, the relationship between mentors and mentees should be one that is developed over time and that could help mentees achieve their post-graduation goals (Hoffman, 2014; Lenz, 2014). Allen and Smith (2008) discussed certain areas that mentors can address, stating that there are

five domains: integration of the student’s academic, career, and life goals with each other and with other aspects of the curriculum and co-curriculum; referral to campus resources for academic and non-academic problems; provision of information about degree requirements and how the university works with regard to policies and procedures; individuation, or consideration of students’ individual characteristics; and shared responsibility, or encouraging students to assume responsibility for their education by helping them develop planning, problem-solving, and decision-making skills. (p. 609)

The use of these domains reflects the student’s development in a holistic manner because the value of mentoring might only be best realized when the mentor and the student take responsibility for each of these aspects. The student should develop their skills as a self-directed learner through the effective use of these domains. The faculty mentor should serve as a guide to assist the student in this development. Furthermore, Livingstone and Naismith (2018) found that “There is a clear consensus that mentoring has become increasingly important in higher education to facilitate integration into the culture of a programme and institution and is pivotal as a student support mechanism to the success of students’ learning” (p. 78).

Regarding the historically underserved college student population, DeAngelo et al. (2016) found that the faculty members who are engaged with research and co-curricular and extracurricular undertakings were better equipped to make students feel comfortable in an academic setting and assimilate them into that environment. One of the problems this population faces is the lack of social capital and knowledge about the processes and procedures that colleges follow. The academic culture that is referred to might be intimidating for students who have not had a lot of parental involvement in their formal education.

Supports for Mentorship at the Institutional Level

In addition to understanding the student needs and the best practices for mentoring, the institution should make it clear that mentoring students is a valued and supported practice at the institutional level. DeAngelo et al. (2016) also noted that, “Creating a culture that supports extra-role mentoring behavior is made even more challenging by the current higher education political landscape of budget cuts and increasing reliance on a contingent and part-time faculty workforce” (p. 330). Institutional leaders should work with their team members to ensure resources are appropriately allocated. As for summative evaluation of advising in general, Anderson et al. (2014) suggest institutional leaders develop consistent measures to determine the effectiveness and quality of student success because of meeting with their mentors and advisors. If the faculty mentors who work with students do not know what the students’ expectations are, the professors may not know how to tailor their interactions to the needs of specific students. For example, if a student has a solid plan of study for degree requirements and is looking for advice about career planning, the mentor should be able to access information that would tell him or her what the student needs before meeting with the student. However, this does not always occur.

Because the demands on faculty time are so great and the incentives are often so low, faculty may decide not to dedicate as much of their time to mentoring. DeAngelo et al. (2016) found that because these mentoring and non-teaching roles develop without assistance, these activities are less likely to be institutionalized as part of the fabric of faculty responsibilities and institutional mission. Faculty thus have a hard time deciding how to structure their time to best meet the needs of the students they mentor while fulfilling their institutional-level obligations. The implication is that administrators might just assume that students and faculty members are developing close professional relationships. However, this assumption does not work for all students. Lenz (2014) argues that students need to be well-informed about the mentoring process, what the benefits of participating in a mentoring relationship are, and how to identify appropriate mentors. Students should be informed of the reasons why effective mentoring can help them in the future, rather than it being something they must do only while currently enrolled. The issue here is that because of the shift in the way work is organized at institutions, (i.e., using adjunct professors who may teach at multiple institutions), the inclination to devote the time necessary to mentoring students at any one institution may be significantly reduced.

Faculty Training

Faculty professional development and training are at the heart of supporting programs that seek to impact student academic performance. However, Lattuca and Stark (2009) comment that “many faculty members are willing to address students’ intellectual (cognitive) development but uncomfortable with the idea that they are responsible for personal, attitudinal, or career development” (p. 153). The implication here is that when administrators wish to implement a program that relies on the work of faculty, there should be support and encouragement or training provided to equip the faculty members in the work of the program. Faculty members may be comfortable with advising students on courses to take in their plan of study but doing “extra” mentoring such as the tasks described previously may require further administrative support and training. The “second level” responsibility of personal, attitudinal, and career development is an area in which institutional leaders and trainers should continue to develop faculty competence and comfortability.

The purpose of the training facilitator for mentors at Newtown University was to encourage group learning of effective methods to create and develop long-lasting professional mentoring relationships with the RAM mentees. Sogunro (2004) found that, “Authentic learning occurs when learners can directly and independently practicalize the concepts learned. ... The key implication, therefore, is for trainers to have the ability to structure a series of experiences related to particular learning activities” (p. 369). On the day of this training, the facilitator disseminated a packet to all RAM faculty mentors and walked through the program from the initial stages of introduction of the mentors and mentees to developing a connection, and then covering suggested topics for mentoring. The key portion of the presentation was the role-playing where the

facilitator asked two professors to come to the front of the room to demonstrate a meeting between a professor and a student. Their conversation lasted about 5–10 minutes but what transpired in their role-playing provided an opportunity for the attending faculty mentors to see one example of how the conversations might work to address student needs.

This interaction between the faculty participants, as well as the other mentors present, supports Sogunro's (2004) assertion that, "With role-play, trainees are involved as actors. A trainee may act as many parts as possible. The more parts a trainee acts out in a learning activity, the more he/she learns of that particular activity" (p. 370). The aim of any training or other support would be to better assist the faculty mentors in facilitating more in-depth conversations with their RAM mentees.

Leadership in Higher Education

The implications for practice for administrator and faculty interactions in higher education are to help encourage team thinking, which Bensimon and Neumann (1993) differentiated from groupthink. According to Bensimon and Neumann, groupthink involves the suppression of individual thought and voice while team thinking requires individuals to work their minds and express their thinking publicly or to other team members, regardless of how divergent from the group norm their thinking may be. Through a team-based approach, RAM mentors and mentees supported each other and shared ideas for suggested improvements, as well as items that have been going well during their mentoring experience.

Leaders of higher education institutions should be cognizant of the shifting environments in which they work, as Lattuca and Stark (2009) comment, "Change in higher education is a messy, complex, and iterative problem-solving process that includes conflicts over interpretations and solutions, political maneuvering, unspoken assumptions, and agendas that frustrate dialogue" (p. 319). It is within these complex, dynamic, and fluid organizations that institutional leaders should work to fulfill organizational objectives while meeting the needs of campus constituents, including faculty, staff, and students.

Research Methodology and Design

In this section, we focus on the research methodology and research design used for this study, including sample selection, data collection, and data analysis. A qualitative research methodology is a type of research that refers to an in-depth study of a phenomenon using interviews, face-to-face interviews, or other observation techniques to collect data from people in their natural settings (Creswell & Creswell, 2018; McMillan & Schumacher, 2010). Qualitative research is used to explore and understand the meaning individuals or groups ascribe to a social or human problem. In this study, an individual online or open-ended survey was used to collect data from the RAM students and mentors. The data collected from the open-ended survey was used to create questions for the RAM faculty mentor focus group.

Purpose

The main purpose of this research was to explore the experience of RAM's stakeholders (mentors and mentees) regarding the impact of the program since its inception in June 2016 through its conclusion in December 2019. By examining the perceptions of the stakeholders, the strengths and weaknesses of the program were also determined, including issues and concerns that could provide cues for maintenance, modification, and/or improvement of the program.

Research Questions

Two research questions were created for this study:

1. What are the stakeholders' (mentors and mentees) perceptions of the RAM program's impact on students?
2. What are the stakeholders' (mentors and mentees) perceptions of the strengths and weaknesses of the program?

Sample Selection

The participants for this study (i.e., RAM faculty and students) were selected by purposive sampling. Purposive sampling selects those who can provide the most valuable information pertinent to the study of interest (Creswell & Creswell, 2018; McMillan & Schumacher, 2010). In this study, 18 professors from 18 departments participated as mentors (see Table 1). Ten of the mentors were women while eight were men. The racial backgrounds of the mentors included White (12), Asian/Pacific Islander (3), Black (2), and Middle Eastern (1).

Table 1. *The Distribution of RAM Faculty Mentors*

Prof. ID	Field	Race	Gender	Rank
A	Psychological Science	White	Male	Associate
B	Finance	White	Female	Professor
C	Psychological Science	Asian/Pacific Islander	Female	Associate
D	Criminology	White	Male	Assistant
E	Technology and Engineering	White	Female	Associate
F	Finance	White	Female	Professor
G	Biology	White	Male	Professor
H	Accounting	White	Female	Professor
I	Management Information Systems	White	Female	Professor
J	Anthropology	Asian/Pacific Islander	Male	Assistant
K	Mechanical Engineering	Middle Eastern	Male	Associate
L	Technology and Engineering	Hispanic	Female	Assistant
M	Chemistry/Biochemistry	Asian/Pacific Islander	Male	Assistant
N	Sociology	White	Female	Professor
O	Educational Leadership	African American	Female	Assistant
P	Exercise Science	White	Female	Professor
Q	Criminology	African American	Male	Associate
R	Biomolecular Science	White	Male	Professor

Instrumentation

We used an online open-ended survey to collect data about the mentors' feelings regarding the mentoring process and their sense of self-efficacy. This instrument gathered detailed data essential to understanding faculty mentors' lived experiences. The second open-ended instrument was used to collect data from the RAM students regarding their participation in the RAM program and how their work with their faculty mentor shaped their college experience and academic performance.

The data collected with these instruments was used to create the faculty mentor focus group questions. Data analysis began by reading and re-reading the data transcribed from the interviews and the focus group discussions followed by recorded patterns of meanings. We analyzed the data thematically following Creswell and Creswell's (2018) six-step process: organizing and preparing data for analysis; reading, re-reading, and categorization of data; coding to condense data into smaller bracketing or more manageable chunks; identifying emerging categories or themes; providing a more narrative description of themes; and making an interpretation of the findings or results to determine the lessons learned. As shown in Table 2, seven themes emerged from the data: relationship and trust building; student personal issues, interests, and modeling; academic planning; career planning; effective training techniques for mentors; factors of students' success; and awareness of research opportunities.

Demonstration of Rigor

In order to ensure that this research process was trustworthy, we adopted Toma's (2011) four categories of rigor: credibility, transferability, dependability, and confirmability. In a qualitative research study, rigor is a requisite for establishing trust or confidence in the findings or outcomes of a study (Creswell & Creswell, 2018). Member checking was done by debriefing with the RAM faculty mentor participants after the online survey was completed to ensure that the participants' views were a true representation of their experiences. The transferability of the study's findings was determined through thick description, suggestions for further research, and implications for higher education. Readers can use the data from this study to compare and adapt (with necessary caution) some findings to mentoring programs with similar characteristics to that of Newtown University. The dependability of this research was supported by using multiple sources (i.e., an online survey, interviews, and focus group discussions) and provided a more complete picture of the lived experiences of the RAM program participants. With deep thoughts, critical reflections on the data, thick description of the interactions among mentors and mentees, and member checking, the researcher obtained confirmation that the analysis of participants' lived experiences was accurate.

Furthermore, the researcher's role as program coordinator was clarified to reduce potential biases. The following measures were taken to ensure clarity in this study: active listening, accurate recording of experiences, careful analysis of responses from mentors and mentees, and frequent debriefing sessions with my research advisor. Table 2 shows participants' perceptions of the program's impact and strengths.

Table 2. *Some Key Emergent Themes Observed from Data*

Theme	Number of mentor responses (10 total)	Number of mentee responses 11 total)
1. Relationship building/communication/trust	10 (100%)	5 (45%)
2. Student personal issues/passion/interests	7 (70%)	6 (54%)
3. Career planning	4 (40%)	7 (63%)
4. Academic planning	9 (90%)	7 (63%)
5. Effective training techniques for faculty mentors	5 (50%)	N/A
6. Factors of student success	9 (90%)	8 (72%)
7. Awareness of research opportunities	7 (70%)	4 (36%)

Relationship Building and Trust

One major emergent theme in this study was the building of professional relationships between the mentor and the student. A professional relationship develops over time and is the result of a commitment between both parties to see that the benefits to both mentor and mentee are realized. Participant "E" observed that:

The mentee must have a willingness to be mentored; the relationship must be given ample time and opportunity to grow and develop. If the mentee does not trust the mentor or understand the benefits of the relationship it is bound to fail. One of the first issues the RAM program administrators discovered was that many of the incoming first-year RAM students were unsure of what the purpose of their being selected for the RAM program was.

Student Personal Issues, Interests, Passion, and Modeling

Participants reported that these emergent themes involved paying special attention to student personal issues and interests, as well as helping students develop a passion for academic and professional success. Perhaps because of the rapport established from the mentor–mentee relationships, some mentors indicated that several of the mentees were able to discuss personal matters with them. One mentor stated, “being comfortable sharing personal issues or problems with the mentor is like a safe haven for the mentee.” One of the emergent issues from the faculty participants was explained well by faculty participant “L”:

For example, some of them don’t like the idea of going for tutoring and asking for help. So, I told them that when I had issues with physics during my undergraduate program, I went to physics tutoring sessions for help.

Role modeling can be an effective technique to convey important ideas, as evident here when the students can see that their problems are not unique to them. Comments such as this create the foundation for an effective mentoring relationship.

Academic and Career Planning

Academic and career planning constitute an impactful aspect of the program as indicated by the participants. Ninety percent of the mentors and 63% of the mentees noted that academic planning was a major topic of their conversations. Likewise, 40% of the mentors and about 63% of the mentees indicated that career and post-graduation planning were important topics. Student participant “C” described an in-depth account of how his academic experience was shaped by meeting with the RAM faculty mentor:

My academic planning has not changed, I still feel very focused on my major and strive to work towards getting a higher degree of education. My career planning has taken more shape as I am learning what I want to focus more on and what I want to see in my future through research and talking to my mentor. I appreciate the time he takes to see me and talk to me about my major and other life pursuits.

A mentee stated: “My mentor’s guidance in planning the courses to take in my area of study, especially with regards to the electives and the best time to take them was really helpful.” Overall, after meeting with their mentors, the mentees became keener in their academic and professional interests.

Effective Training Techniques for Mentors

An important emergent theme from the perspective of the mentor participants pertained to the extent to which, and what kind(s) of professional development training should be conducted for people entering a mentoring program. One of the most informative responses obtained was that from faculty participant “D” who stated that,

I think it is important to provide tools to make sure that faculty know of all the opportunities that exist at the university. Even as a faculty member, we may be trained in our area of study and know the curriculum, but it can be difficult to be experts on every opportunity in terms of clubs, study abroad, etc. It is important that faculty are knowledgeable in those areas or at least know the right direction to

point the student toward. If the student shows interest and the mentor fumbles over the issue, they may lose faith that the mentor is fully committed.

These comments allude to the debate in the literature about the separation between advising and mentoring. In this case, the mentor states that it may be more helpful to inform faculty about extracurricular and other opportunities that relate to the student's personal development than those that relate to the student's academic development. Future mentoring programs should include training for mentors on time commitment and how to develop professional relationships with students. This research and observations from the RAM program participants suggest that five areas (integration, referral, provision of information, individuation, and shared responsibility), are critical for ensuring the success of the development of the mentoring relationship. Mentors should set expectations for the student and clearly define what the student should expect from the mentor, as the mentoring relationship develops.

Factors of Student Success

This theme connotes factors of student success in college. The identification of factors of student success has a profound effect on improving academic performance and timely graduation. As stated by a mentee, "Since my mentor narrated how she became a professor and explained several study habits which I pretty much adhere to, my GPA has continued to improve." Moreover, "Looking like me in itself is self-motivating. Among other things, I limited my off-campus social interactions based on her concept of 'delayed gratification.' I also spent more time seeking help at the learning center as well as spending more time doing my homework."

Imparting to Students an Awareness of Research Opportunities

This emergent theme manifests the efforts of RAM faculty mentors in inculcating inquisitive skills in RAM students and introducing them to the research process. A question for the RAM faculty mentor focus group participants was, "If you were recruiting students to a mentored research experience, what would you tell them about it?" This question provoked insight into what the professor or mentor might be thinking when designing a project that works with an undergraduate student. Professor "L" described the following process:

The first thing that I did was I told him the kind of projects that I like to do. I do more of energy conservation, water conservation and so I basically gave him a range of ideas that he could work on. ... He came up with four different topics of projects that he would like to work on. Now, I'm focused on ... he has a task of every week to look a little bit more in depth into each one of the ideas that he has and then more for the engineering components and stuff like that of each one of them. ... Then, once he has chosen the problem, the next step will be to develop the solution of that particular problem and then eventually prototype it.

RAM student participant "C" noted that his interest in research was heightened by the RAM mentor who served as a professional guide. He stated:

I love the professional atmosphere that comes with the RAM program, I never feel as though my hand is being held or the program is smothering me. I feel as though there is the perfect balance between professionalism and help.

These perspectives are similar to what a RAM faculty participant "J" reported in the focus group, stating that, "I had a specific academic interest related to her and she saw me on a regular basis and then I applied for one of those research grants and we worked within the semester on Asian-Canadian formations in central Connecticut." This captures the essence of one of the purposes of RAM; that, through professional relationships developed through mentored academic pursuits, students may develop new academic and career interests.

Discussions, Implications, and Conclusion

The results of this research indicate that several factors affect the extent to which professional mentoring relationships develop between professors and students. The following are highlights from the perspectives of the RAM program participants, as well as a description of participants' experiences and their impacts. These may be used by future administrators, instructors, mentors, and researchers to develop more effective undergraduate student mentoring programs.

RAM faculty mentor participants reported several ways in which their work might be supported. First, mentors discussed the benefits of participating in live demonstrations of a mentoring scenario to visualize the process of how to begin and develop the conversation with a mentee. Sogunro (2004) found that "Authentic learning occurs when learners can directly and independently practicalize the concepts learned. ... The key implication, therefore, is for trainers to have the ability to structure a series of experiences related to particular learning activities" (p. 369). Many mentor participants had not observed this role-playing technique prior to working with their RAM students. In line with this suggestion, faculty participants also sought training on effective communication techniques to develop successful interactions with mentees. Mentors also discussed the importance of being a role model for the mentees. For example, focus group participants described how they demonstrated to mentees the process for answering a problem they did not know the answer to. This might be as simple as how to use the library website. Representing practical problem-solving techniques to mentees may assist students in a variety of situations in college where they are unsure of what steps should be taken (i.e., achieving higher grades in a course).

Faculty participant "A" described another important characteristic of mentoring, saying, "I have always tried to emphasize availability, accountability and action in mentoring all students who are willing and eager to be mentored." This participant describes the mentoring process as something that is familiar to them, but also indicated a reciprocal relationship should develop from the mentoring process. However, developing that professional relationship can be difficult: As faculty participant "I" noted, "The first meeting was kind of getting to know them, trying to understand what their goals were." Communication, trust, and relationship building appear to be three of the most important characteristics that develop in a successful mentoring relationship. Faculty participant "I" explained that, "They don't come back [for meetings] just because they have to fulfill their two meetings per semester, but because they see opportunities through advising for getting internships, getting recommendation letters."

RAM faculty mentor participants further observed that while they felt empowered to assist students with a variety of needs, they commented that more training or informational sessions about a variety of campus issues would be helpful. Some of the topics mentioned included increased knowledge of extracurricular activities, clubs, sports, study abroad programs, career services, and other aspects of the college experience that students may encounter during their time at the institution. Anderson et al. (2014) suggested, "An ongoing professional development effort to train advisors ensures advisors continually meet student expectations even when students switch majors or advisors throughout their academic career" (p. 39). The RAM faculty mentor participants suggested that future mentoring programs should include more data to support the reasons for implementing mentoring programs to achieve the goal of increased student academic achievement.

Furthermore, Sogunro (2004) recommended that "Role-playing technique(s) can accelerate the learning process and skills acquisition and thus can be expected to bring about laudable learning outcomes in a relatively short period of time" (p. 368). Future mentoring programs should seek to determine what professional development interventions should be implemented for the mentors to maximize their abilities to develop professional relationships with their mentees.

RAM students reported that an effective way to develop the mentoring relationship is to first get to know each other as people, including where they come from, what their work-school balance is like, and whether they

have any family responsibilities. These issues might come up later in mentoring relationships as students become more comfortable divulging personal details about themselves. DeAngelo et al. (2016) argue that “key components include relationships that provide (1) multiple types of assistance; (2) support in career development, psychosocial and cognitive outcomes, and role modeling; and (3) mutual and personal relationships” (p. 319). RAM students reported a sense of being guided by their mentor while being encouraged to try new intellectual challenges and develop their academic skills and career planning.

Administrators of future undergraduate mentoring programs may want to limit the selection of student mentees and faculty mentors to one specific major or school within the institution. For example, students who meet the selection criteria might fall within the school of engineering, science, and technology. Selection of mentors should then only come from that school. Pairing students in this manner might enable better matching of students with a professor who might also serve as their primary academic advisor or course instructor. These indirect interactions may lead to more direct mentoring opportunities. Furthermore, this arrangement may reduce the additional steps that students and mentors might take to seek out each other to schedule individual mentoring meetings.

Faculty and students reported that communication and trust were fundamental to developing a successful mentoring relationship. Student participants commented that while the RAM program at Newtown University was mostly effective, more information and details about program specifics should be provided to students at the beginning of the program. The first reason is that students coming into their freshman year have many things to worry about and take care of upon arrival on campus. These might include learning their way around the campus, understanding their class schedule, and adjusting to living in a dorm, among other issues. Students indicated that these program details, or lack thereof, contributed to early confusion about the purposes for their selection for the RAM program and thus did not allow them to meet and develop a professional relationship with their faculty mentor.

RAM student participants reported that the topics of their conversations with their faculty mentors consisted of career advising as well as academic planning. Students were simultaneously encouraged to develop their own techniques for taking responsibility for their own learning, while often being guided by their faculty mentor. RAM students and faculty mentors alike discussed the need to provide the time and resources necessary to adequately develop a meaningful mentoring relationship. For RAM students, balancing a commitment to working with the RAM faculty mentor on a regular basis in addition to their coursework, outside employment, and family commitments might cause students not to participate fully in all the intended interventions the program provides.

Textural Description of Participants’ Experiences

The participants in the RAM program described their experiences in developing professional relationships between the RAM faculty mentors and the RAM students. Students reported developing connections to opportunities they did not know would be available to them because of developing a close working relationship with their RAM faculty mentor. RAM student participant “A” reported that, “I have a solid path in my academics which I did not have prior to this program. We often talk about my major, research opportunities, life after college things along those lines.” These comments were examples of what several RAM student participants observed because of interactions with their faculty mentors.

RAM faculty mentor participants described a sense of heightened awareness of important issues facing the student population. These professors might not have been aware of the extent to which students in their classrooms struggled to successfully complete their coursework, ultimately leading toward degree completion. Mentors reported that to implement the research experience portion of the mentoring program, more work and preparation should be done to communicate to students the value of participating in a mentored research experience. Mentors also noted a desire for more coaching and planning on how to incorporate a student into

their work, so as not to interfere with project progress while giving the student a meaningful learning experience.

The Essence of the Experience as a Participant in the RAM Program

The RAM faculty mentors noted several key areas that assisted in their development as mentors. First, mentors noted that prior to this experience as a mentor, several had not been aware of many of the issues that students are facing. RAM faculty participant “G” noted that, “I started placing bigger importance on students’ engagement with extracurricular activities, while at the beginning of my participation in the program I was emphasizing achieving the highest GPA.” This data suggests that mentors should continue to place a focus on academic achievement but also support the other important aspects of student development. These might include student participation in mentored research, student clubs and activities, and other extracurricular programs. RAM faculty participant “C” explained that,

I appreciate the more well-rounded and comprehensive approach that the RAM program gave me at orientation for interacting with my mentees. It goes beyond just academic and career planning but making sure that connection is there from the beginning and getting to know the students in every aspect.

The focus here is on the development of the professional mentoring relationship, as mentors and mentees should become more comfortable with one another sharing information. Mentor participants discussed the importance of helping students find solutions to their problems using proper techniques. RAM faculty mentor participant “E” observed during the focus group that,

I have had questions come up that I didn’t know the answers to, but we always found the answers and I always told my mentees, you may have questions I don’t have answers to, but we will find the answer together.

Role modeling for how to solve problems was reported as an effective technique for mentors. The students would learn by doing from the mentors, who demonstrated how to find information to resolve the issue they are facing. Mentoring relationships need to be given the appropriate time to develop and should be supported administratively by implementing techniques to clearly describe program purposes and expected outcomes to undergraduate mentees as soon as possible. The use of welcome dinner events, summer orientation sessions, mailing summer informational handouts and letters, as well as First-Year Experience (FYE) course presentations could orient students towards the benefits of participation in a mentoring program.

Implications for Further Research

Findings from this study suggest that further research on undergraduate faculty-student mentoring programs is required. Faculty mentor selection was a critical area of concern that developed over the course of this grant. Initially, the professors were individually selected by the former Newtown University provost. Inquiries were made to specific professors to participate as mentors and those mentors were provided a stipend per semester. Additional funds were provided for faculty taking on a student in a mentored research project. Administrators of future mentoring programs might select professors to serve as mentors from any of the following methods: volunteer recruitment for professors from various departments to participate; open selection as a “first-come, first serve” method; or handpicking from a diverse representation of majors at the institution. Individual selection of mentors was the method that occurred at Newtown University for this program; however, the findings of this study showed that selected professors should be highly motivated to participate in mentoring. Volunteer recruitment or open selection of mentors might produce better results for mentoring.

Further research should be conducted on the best practices for ensuring maximal student participation in the mentoring program and for students to participate fully in all interventions. For example, several RAM students participated in a mentored research experience with a RAM faculty mentor. While student participation in mentored research was a goal for the program from the beginning, most Newtown University RAM students did not participate in a mentored research experience. Students should be presented with information appropriate to their understanding of what research is, how research works, and what it looks like to have a professor mentor them in research. Faculty mentors should be provided with adequate funding and training that would make it easier for them to conduct research while mentoring a student through the project. Students should be given meaningful work that contributes to the project's overall outcome and encouraged to present their work at national and regional conferences with their mentor.

Another area for further research would be the best practices for effective methods to recruit, train, coach, and support the professors selected to serve as mentors. At Newtown University, mentors were selected by e-mail solicitation from the previous provost of the institution. Mentors were then paired with incoming freshmen students and encouraged to invite the students to individual meetings each semester. During the summer of 2017, RAM faculty mentors were given the opportunity to attend a training session conducted by a RAM mentor. Training techniques may include but are not limited to communication, counseling, role-playing, and accessing information or resources relating to university services. RAM faculty mentor participant "A" described the need for training:

I think that there should be more guidelines regarding the amount of time that mentors are expected to spend with students and perhaps some training in basic counseling and communication skills. I think training in engaging students from the start and figuring out ways empirically to get them involved in the program from day one, would be a good idea to pursue.

Future mentoring program administrators should develop training or coaching sessions for mentors early in the process of mentoring or during the very beginning of implementing the mentoring program. Mentors would ideally have an opportunity to observe and participate in role-playing demonstrations of mentor-mentee interactions, ask questions of the presenter(s), and reflect on key issues with colleagues.

Finally, an area of importance is to develop strategies to engage students in mentored undergraduate research opportunities. Most Newtown University RAM students did not participate in mentored research; however, many were exposed to research methods through their coursework. Students would need adequate time and preparation with a professor to take on a mentored research experience. Professors described four key areas that should receive the focus of future mentored research: understanding students' level of engagement with research to the current point and "meeting" students where they are; providing funding for research projects, especially towards group trips, conferences, and other educationally enriching experiences; offering guidance to students on developing and practicing research skills and techniques; and assisting student development of a research problem or research question that they find interesting. Future mentored research experiences should carefully match students to a professor who not only might teach in their major but who also shares a common research interest.

Conclusion

In this study, we examined the effects of a mentorship program on students' academic performance in 4-year college institutions. The findings engender first-hand information that a relationship exists between faculty mentorship and student success at the college level. Also, study findings affirm that institutions of higher education can improve the graduation rates of high-need students through effective mentorship programs and that the effectiveness of this phenomenon is bound by effective leadership and successful implementation of the strategies and techniques discussed herein.

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