

What You Get When You Give: How Graduate Students Benefit from Serving as Mentors

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This study utilizes a social exchange framework to analyze the qualitative narratives of 81 graduate student mentors participating in the Intellectual Entrepreneurship Pre-Graduate Internship at The University of Texas at Austin. Findings suggest that in addition to personal benefits, mentorship has four major professional benefits: a deeper perspective both on themselves and their academic discipline; the development of advising and mentoring skills; contributing to the diversity of their academic and professional field by assisting an emerging scholar from an underrepresented population; and knowledge that mentoring can assist both mentees and mentors in reaching their goals.

The importance of mentoring has been widely touted in business, education, and psychological research. Also referred to as “developmental relationships” (Kram, 1988), mentoring can be understood broadly as associations between senior and junior individuals focused on the junior members’ personal and/or career development and individual growth. These relationships meet two primary needs: career support and socio-emotional support. This broad definition includes long- and short-term relationships, as well as mentors who are formally assigned to protégés and relationships that have developed organically and informally. Much of the empirical and anecdotal literature addresses the ways in which protégés or junior members of mentoring relationships benefit from their interactions with mentors (Allen, Poteet, & Burroughs, 1997; Crisp and Cruz, 2009; Jacobi, 1991; Kram, 1988; Pascarella & Terenzini, 2005; Ragins & Scandura, 1999). The experiences and outcomes of mentors have been given less attention, particularly in studies of mentoring relationships in academic contexts. Thus, this study examines data collected from graduate student mentors to explore the impact of participation in the mentoring program with an undergraduate student on their personal development, professional development, and growth as citizen-scholars, individuals who creatively utilize their intellectual capital as a lever for social good (Intellectual Entrepreneurship Cross-Disciplinary Consortium, 2009).

Ensher and Murphy (2005) state that when addressed, the decision to participate in a developmental

relationship is often described and perceived as a selfless act by a mentor — a decision which ultimately provides benefits for others, but results in little personal benefit. In fact, research on developmental relationships, particularly within universities, has rarely addressed mentor benefits. Rather, researchers illustrate how mentoring is often described as time consuming and emotionally exhausting for the senior members of the relationship (i.e. Aguirre, 2000; Allen, et al., 1997; Banks, 1984; Gibb, 1999; Tierney & Ben-simon, 1996). An emergent body of literature, however, suggests that mentorship is in fact more reciprocal, with protégés *and* mentors accruing significant benefits (e.g. Allen, et al., 1997; Boice, 1990; Burke, McKeen, & McKenna, 1994; Ensher & Murphy, 2005; Ragins & Cotton, 1993; Ragins & Scandura, 1999). Much of this research has been conducted utilizing a social exchange framework, which suggests humans are rational, self-interested actors who want to maximize their own goals. While every relationship is perceived as having some form of cost, individuals participate in relationships where they perceive potential in gaining access to resources, enabling them to reach goals that they are not able to reach by themselves (Emerson, 1981; Lawler & Thye, 1999). Thus, rather than engaging in relationships for altruistic reasons, individuals engage in a cost-benefit analysis prior to participating (Emerson, 1981); costs are subtracted from benefits, leaving something akin to a “profit” associated with the formation of a relationship (Homans, 1958).

When viewed through a social exchange framework,

mentorship is a relationship from which mentors and mentees should benefit. Research, largely in the field of business, highlights the benefits of developmental relationships from the mentor's perspective, focusing mostly on the outcomes related to personal growth and development. Allen, Poteet, and Burroughs (1997) suggest mentors gain benefits such as close relationships and friendships, organizational recognition, the loyalty of their mentees, and a more competent workforce. Developmental relationships also provide mentors with access to information, psychological support, internal satisfaction, and more widespread acknowledgement and respect for their abilities (Kram, 1988). Interestingly, there is also research suggesting some mentors see their protégé's development and growth as a personal benefit (Allen, et al., 1997; Ragins & Scandura, 1999), referred to by Ragins and Scandura as "relationship spillover."

While informative, this literature is somewhat limited in that it focuses on personal rather than professional benefits associated with developmental relationships. Allen, Lentz, and Day (2006) explored the relationship between mentorship and career outcomes for health care professionals, revealing that those who were or had been mentors reported higher salaries, more promotions, and higher assessments of their professional success than those who never served as mentors. Griffin (2008) suggests certain forms of interaction with protégés, particularly those focused on writing and research, can enhance the scholarly productivity of Black faculty members. Thus, while there is some indication that developmental relationships can potentially positively influence mentors' professional outcomes, research in this area is lacking and warrants further investigation.

While limited, there are a few studies which have begun to consider both the personal and professional outcomes mentors gain when working with mentees in a college or university context. Scholars and institutional leaders have largely recommended undergraduates establish relationships with faculty based on the positive outcomes associated with mentorship (see reviews by Crisp & Cruz, 2009; Jacobi, 1991; Pascarella, 1980; Pascarella & Terenzini, 2005). However, many undergraduates can and do have fruitful relationships with graduate students. Graduate students can be important sources of academic support and may be more accessible option for mentorship considering that they often have more time than faculty members (Dolan & Johnson, 2009; Pfund, et al., 2006; Rosenthal & Shinebarger, 2010), who are often busy with efforts to achieve tenure and promotions in an academic system that values research over teaching and service (Tierney & Bensimon, 1996). Rosenthal and Shinebarger (2010) also suggest that peer mentors may be more comfortable dealing with non-academic concerns outside of the traditional advising relationship. Further,

graduate students are also often engaging in research in a more hands on way than faculty principal investigators, particularly in the sciences (Pfund, et al., 2006). Thus, graduate students might be in a better position to provide students with hands-on instruction on the craft of research and offer early exposure to academic life and work.

While research in this area is extremely limited, there is some indication graduate students gain access to important resources when they mentor. For example, Barker and Pitts (1997) found participation in mentoring relationships provides graduate students with opportunities to develop leadership skills, give feedback, and implement appropriate helping strategies. Dolan and Johnson's (2009) study of the outcomes of 11 science graduate student and postdoctoral mentors participating in an undergraduate research program shows mentors perceive development gains for their protégés and themselves when mentoring undergraduates. Specifically, mentors expressed their personal enjoyment, identified gains in productivity, and appreciated having opportunities to develop their skills in mentorship and the direction of research as a consequence of working with undergraduates.

Dolan and Johnson (2009) offer three hypotheses about the potential mentoring relationships hold for graduate student skill development. Through experiences serving as mentors, graduate students can enhance their understanding of the content and craft of research; their communication and teaching skills can be strengthened; and they can experience positive emotions and a great deal of personal enjoyment. While Dolan and Johnson's research offers some support for these hypotheses, their exploratory study addressed the experiences of a small group of graduate and postdoctoral mentors in the sciences, all mentoring students in a program based in laboratory research experiences. The authors call for further work examining mentoring relationships between graduate and undergraduate students across multiple academic contexts. This study addresses that call, examining the ways in which graduate student mentors participating in a unique academic program experience their relationships with and ultimately benefit from participating in developmental relationships with undergraduate mentees.

Methodology

Within the context of social exchange, both mentors and protégés, or in this case undergraduates and graduate students, will benefit from mentoring relationships (Ensher & Murphy, 2005). Several studies address personal benefits that accrue to mentors in business, such as close relationships and friendships, organizational recognition, the loyalty of their mentees, socioemotional support, and satisfaction. Few studies, however, identify professional benefits associated with mentoring, nor have they fully

considered the benefits of serving as a mentor within an academic context. This study utilizes written participant narratives to explore how mentors derived benefits from the mentoring relationship.

Narratives of this sort are commonly used in qualitative research, and represent credible sources of data (Sikes & Gale, 2006). Qualitative inquiry aspires toward generalizability, though in a very different way from statistical research. *Analytic generalization* is applied “not... to some defined population that has been sampled, but to a theory that may have much wider applicability than the particular case study” (Maxwell, 2007). The narratives analyzed forthwith speak directly to theories of social exchange (Emerson, 1981; Ensher, et al., 2001; Gibb, 1999; Homans, 1958; Lawler & Thye, 1999; Myers, 1993). As the responses in the dataset represent over 50 percent of all mentor participants over a three-year period, and a heterogeneous, diverse population along the dimensions of age, race, and academic discipline (see Table 1), we feel strongly that the study design speaks to the phenomenological understanding of what benefits are derived from senior participants in mentoring dyads, in the manner that qualitative research expert Joseph Maxwell (2007) describes: “[I]t resembles experiments in the physical sciences, which make no claim to statistical representativeness (physicists don’t draw random samples of atoms), but instead assume that their results contribute to a general theory of the phenomenon.”

We utilize the aforementioned social exchange framework in guiding this analysis of graduate student mentors’ narratives written on their participation in the Intellectual Entrepreneurship (IE) Internship at The University of Texas at Austin (UT-Austin) to address the following research question: What personal and professional benefits do graduate students mentors identify as resulting from their developmental relationships with undergraduate student mentees?

Institutional/Programmatic Site

All participants were graduate students at UT-Austin, one of the largest and most diverse public universities in the United States. UT-Austin employs 21,000 faculty and staff across 17 colleges and schools, and enrolls a student body of more than 50,000. More than 8,700 bachelor’s degrees are awarded annually in more than 170 majors, and the university is a national leader in the number of undergraduate degrees awarded to minority students. The graduate school at UT-Austin enrolls 11,000 students and is a national leader in graduate degrees awarded (Office of Public Affairs, 2009). As a member of the Association of American Universities (AAU), the consortium of 63 leading research institutions in the US and Canada, UT-Austin devotes significant resources to graduate education.

UT-Austin is the home of the Intellectual Entrepre-

neurship Pre-Graduate School Internship. The internship is part of the larger IE Consortium, which has the mission of instigating learning across disciplinary boundaries, promoting diversity in higher education, and generating collaborations between the academy and society (Intellectual Entrepreneurship Cross-Disciplinary Consortium, 2009). The IE Pre-Graduate Internship is open to all undergraduate students at The University of Texas at Austin and has served more than 1,100 undergraduate students since its inception in 2003. Approximately 60 percent of interns are from underrepresented populations or are first-generation college students (Division of Diversity and Community Engagement, 2010).

Table 1. IE Mentor Study Participants

	Category	N
Gender	Men	25
	Women	56
Race/Ethnicity	White	45
	Latino/a	11
	Black	10
	Asian	11
	Unknown	4
Discipline	Natural Sciences	11
	Social Sciences	13
	Liberal Arts	16
	Applied Sciences	20
	Fine Arts	3
	Area Studies	6
Classification	Professional School	12
	Master’s	31
	Doctoral	40
	Professional Degree	9
	TOTAL	81

Internship Design, Structure, Assessment, and Administration

The specific objective of the IE Pre-Graduate School Internship is to connect undergraduates with faculty and graduate students in the student's field of study to explore aspects of graduate study. The internship is available to all undergraduates at UT-Austin; admission is based on the student's ability to find and gain the consent of a faculty member and/or graduate student willing to supervise the internship. The internship is offered for academic credit; participants work closely with their mentors to create an internship experience aimed at exploring, anthropologically and from the ground up, their chosen field of study, ultimately assisting aspiring undergraduate students in understanding the processes necessary to achieve the goal of attending graduate school. Interns learn about the unique aspects of graduate study and what makes graduate education distinctive from an undergraduate experience, which can include exposure to a wide range of activities such as scholarly research, writing for scholarly audiences, and participating in seminars.

All enrolled graduate students at UT-Austin are eligible to serve as Pre-Graduate Mentors, and are encouraged to serve as mentors to enhance their advising and teaching skills on an individual basis. A limited number of graduate students who serve as mentors to an underrepresented minority or first-generation student are eligible for a \$500 stipend, and many colleges also offer an IE Travel Grant (\$100-\$500) for conferences and meetings. Graduate students bring their prior experiences to bear as mentors, and attend one of the required sessions with their interns. Mentors are encouraged to work collaboratively with their interns when issues arise; in extreme situations, the IE director works with the dyad to solve problems.

Mentors (in conjunction with their interns) are responsible for developing a strategy for exposing students to relevant activities and experiences, and direct and lead the intern in these endeavors. Purposefully, the internship does not include a required list of activities; rather, interns and mentors collaboratively create the internship content according to interest. This nonprescriptive approach to designing the internship encapsulates the philosophy of intellectual entrepreneurship; both mentor and intern, from the inception of the relationship, are charged with the responsibility of collaboratively deciding what experiences, exposures, and interventions will benefit the intern as s/he explores the reality of graduate education in their *specific field*. Examples of internship activities mentors and protégés engage in include: attending graduate classes; shadowing graduate student teaching and research assistants; attending seminars and departmental colloquia; collaborating with mentors on research projects; and traveling to meetings of academic and professional organizations.

The aforementioned responsibilities are merely the minimum requirements to obtain credit; interns and mentors are encouraged to build upon these core requirements to fashion the most optimal experience for the intern. For instance, an intern that expresses an interest in college teaching may work collaboratively with a mentor on a course syllabus, or co-teach a class session.

Before students can enroll in the IE Pre-Graduate Internship, they must submit an approval form delineating their co-constructed duties, responsibilities, and assignments (see Appendix A). The interns must also agree to attend four professional/academic development sessions with the IE Pre-Graduate Internship cohort during the semester and submit four written assignments to the course Blackboard website, where the members of the cohort can read and share their experiences with one another. Additional administrative support is provided by the director of the Intellectual Entrepreneurship Consortium, a faculty member at UT-Austin, who is available to mediate and assist mentor-intern pairs when challenges arise.

Sample

Data for this study were collected over a three-year period (2007-2010) from 81 graduate students who served as IE Pre-Graduate Internship mentors to undergraduates. (See Table 1.) The participants ranged in age from early 20s to 40s, and consisted of 25 men and 56 women. A wide range of academic disciplines was represented, with 11 participants from the natural sciences, 13 from social sciences, 16 from liberal arts, 20 from applied sciences, three from fine arts, six from area studies, and 12 from professional schools. Forty participants identified as doctoral students, 31 were master's students, and nine were pursuing professional degrees. One participant identified as a former IE Pre-Graduate Intern. Additionally, the sample included a diversity of mentors from various ethnic groups. Forty-five participants were White, 11 were Latina/o, 10 were Black, 11 were Asian, and four had racial backgrounds that were unknown.

Data Collection and Analysis

Upon completion of their mentees' internships each semester, the IE Consortium director sent each mentor an e-mail requesting a written reflection on their experience mentoring an undergraduate, with no specific guidelines regarding length, focus, or topic. Approximately half of the IE Pre-Graduate Internship mentors from 2007 to 2010 ($n=81$) submitted a narrative and additionally granted the IE staff permission to publicly post their reflections on the university-hosted IE website. Three mentors submitted a response, but denied permission to post them on the website, expressing concerns about privacy; those responses are excluded from this analysis. The reflections ranged

from paragraphs in the 200-word range to multiple-paged responses in the 400-word range.

Documentary analysis was utilized in analyzing mentor-authored reflections (Ritchie & Lewis, 2003). Documentary analysis suggests researchers focus on the presentation of information about the setting being studied, the wider context, and key figures or organizations (Hammersley & Atkinson, 2007; Prior, 2003), focusing on the personal and social experiences of participants (Erben, 1993). In particular, solicited written accounts, such as those collected from IE mentors, can be “useful ways of obtaining information about the personal and the private” (Hammersley & Atkinson, 2007, p. 127), making them an appropriate information source on mentors’ perceptions of the costs and benefits associated with their roles as mentors.

A team of four researchers read all mentor narratives which were posted on-line, and discussed the themes emerging from the narrative data. The research team then collaboratively created a codebook, documenting these emic themes. The members of the research team then re-read and coded the narratives, working individually to compose reflective analytic memos capturing their immediate impressions. The team met to discuss and come to consensus on the thematic coding, highlighting unique and shared concepts across the narratives. The research team met again to create matrices from the data to identify patterns and points of comparison, in particular identifying key excerpts from narratives that might serve as representative perspectives for the emic themes. Finally, the research team discussed each selected excerpt from the data proposed as best expressing the ethos of the identified themes.

In regard to trustworthiness and validity of the data, the research team utilized direct quotes from the participants’ written reflections, and the use of multiple coders to discern the meaning of their statements. Additionally, the research team protected the privacy of the participants, choosing not to use participant’s actual names, opting for pseudonyms, and only referring to their general field of study in the final write-up.

Limitations

While having the potential to make significant contributions, we acknowledge that there are limitations to this study. First, the findings are derived from self-reported data and hence some responses might be biased toward social desirability. While this study cannot represent the full range of potential costs and benefits graduate students perceive with mentoring, these narratives can be understood as presenting *some* of these costs and benefits. Second, the structure of the IE Pre-Graduate Internship – where interns are required to identify and recruit a graduate student – may attract a pool of mentors who are

particularly invested in mentoring and supporting young people. As such, they may be more inclined to view mentorship favorably and associate more positive outcomes associated with the relationship. However, the study answers a call from mentoring researchers Johnson, Rose, and Schlosser (2007) who have discussed the importance of context-specific, exemplar-based studies of mentoring in higher education.

Findings

Despite the occasional acknowledgement of the cost in time, IE mentors largely used their narratives to identify how they benefited from the mentor-mentee dyad personally and professionally. Four themes emerged from mentors’ narratives, highlighting the ways in which mentors perceived the benefits associated with their relationships. First, serving as a mentor was described as providing graduate students with a deeper perspective both on themselves and their academic discipline. Second, mentorship offered an opportunity to develop advising and mentoring skills graduate students deemed essential for success in their future careers and professional endeavors. Third, participants felt they could help diversify their academic field by mentoring an emerging scholar from an under-represented population. Finally, mentoring heightened participants’ awareness of the reciprocal nature of the pre-graduate internship relationship. Interestingly, this reciprocity was described as being more indirect, and mentors saw an opportunity to pass along guidance to the next generation of scholars as a benefit.

Depth of Understanding

Mentors’ relationships with their mentees provided them with a greater understanding of both themselves and their discipline. Working with a scholar new to the field gave mentors insight into the workings of their field unpacking the hidden curriculum, a concept derived from Jackson’s observations in public schools in the 1960s. Jackson (1968) discussed how educational systems hold values and expectations that reward conforming students and punish those who reject or are unaware of these values and expectations. Margolis and Romero (1988) extended this phenomenon to higher education, and additionally noted that these conformity requirements to institutional expectations have little to do with educational goals, but are essential for success in the schooling context. Perhaps no aspect of higher education is more veiled than graduate programs, clearly seen in the narrative written by Veronica, a natural sciences doctoral student:

[Mentoring] gave me an opportunity to function as a mentor like the kind I had at my small undergraduate university: one where the mentor fosters a relationship

with an undergrad to *demystify* the world of graduate school answering any and all questions about the graduate process and offering pointers for how to open new doors in the beginnings of his/her research career. [Emphasis added]

Veronica served as a translator to her mentee, clarifying information regarding the graduate school application process, and in her words, demystifying and opening doors for an aspiring researcher. Hermione, a humanities graduate student, similarly noted that her mentorship allowed her mentee to “see details of graduate life that may not have been understood any other way.” The process of explicitly communicating expectations and norms gave mentors an enhanced understanding of the aspects of knowledge which are hidden and perhaps inaccessible to first-generation or students from underrepresented populations.

Mentors also reflected on their own individual journeys to and through graduate school during their efforts to support their interns, bringing their own challenges and victories in navigating their discipline to light. In some instances, mentors approached the relationship expecting to provide knowledge and direction to their mentees, only to learn that the relationship provided opportunities for insights into their own career paths. “Usually the students I work with have already determined what they want to do with their future and how to make it work. This was not the case during this internship,” wrote Ingrid, a natural sciences doctoral student. “I found myself explaining the process of pursuing a graduate/advanced degree rather than teaching new techniques. This was helpful to me because it made me think about my own process and gave me insight into why I chose this path for myself.” Michelle, a doctoral student in area studies, described how she, too, grew from the mentoring relationship with her mentee, and that her student helped her be more strategic about her own educational process:

Working with my mentee helped me to stop and think about what I am trying to accomplish as a graduate student, what is most important to me, and the challenges that lie in the process. So much of graduate work, and life itself, is about “process,” so the chance to strategize and discuss it with another student has helped us both to grow in important directions and to solidify our imperatives.

Similarly, Dean, a liberal arts graduate student, noted that his mentee’s development challenged him to think about his own trajectory in his studies: “In assisting my intern to assess her goals, values, and desires for her graduate education, I was simultaneously reassessing my own position within a graduate program.” Dean’s reexamination of his trajectory through the experience of being a mentor gave him the opportunity to “solidify the

choices I have made or propels me to make appropriate adjustments to my graduate career,” an opportunity for which he expressed “sincere appreciation.” Thus, being a mentor allowed Dean reflect on his own goals and reassess whether his choices were consistent with his desired experience in graduate school.

The instrumental advantages of serving as mentor were readily apparent to a number of graduate students. Similar to the old adage that states that the best way to test your knowledge about something is to teach it to someone else, Mark, a doctoral student in engineering, stated:

For graduate students, there is no better way to really learn material than by having to teach the information yourself.... I profited greatly in both my mentoring skills and my understanding of my research by explaining the details to someone else on a daily basis.

A similar observation was made by Janelle, a doctoral student in the social sciences, who stated, “I probably learned (or re-learned in some cases) as much as [my mentee] did.” Thus, instructing a mentee provided Mark, Janelle, and others with an essential opportunity to review information critical in their work, and practice in transmitting that knowledge to others.

Professional Development

While re-learning principles important within their fields, IE mentors were also able to develop their skills as teachers. This finding is consistent with a larger theme, with participants often discussing how the experience of working with an intern gave them skills and/or tools necessary in their future professions, especially for those aspiring to faculty roles. This result was often surprising for mentors, evident in education doctoral student Sarah’s narrative:

What I was not expecting from this program was that I would have learned so much throughout the process. The IE Pre-Grad Internship allows a graduate student mentor to play the role that a tenure-track professor might assume.

Laura, a social science doctoral student, also made connections between her mentoring experiences and her preparation for becoming an assistant professor:

My undergraduate intern learned about graduate programs and the research process. For me, it was a great opportunity to mentor a student which is a main component of an assistant professor position.

Importantly, the narratives revealed that mentors accrued valuable experiences not always available in their graduate programs. Susanne, liberal arts doctoral student,

noted that “mentoring and training a promising student in a one-to-one capacity” was a needed competency in her field, stating that “the Intellectual Entrepreneurship program has been nearly perfect in filling that gap in my training.” Katherine, a communication graduate student, also described her participation in the IE internship as professionally beneficial, and that opportunities to develop ones mentoring skills were not necessarily a common part of professional training in graduate school. She shared that her friends already in the field were now facing challenges associated with their new mentoring responsibilities, noting that “One of my friends who already is a professor said that she wished she could have known how to be a mentor when she was a doctoral student.”

Graduate student mentors also described specific skills within their mentoring relationships that would translate to relationships they would have with students as faculty members. Mentors found that working with an intern provided opportunities to set high standards while providing psychosocial support, mirroring the mentoring processes that they anticipated utilizing in the future when working with students. Some described managing the tension between taking their responsibility to provide a realistic view of graduate study, while helping to increase their interns’ confidence – an opportunity for mentors to practice “soft skills.” Marjorie, a professional school doctoral student, stated, “I thought it was important to discuss with [my mentee] issues concerning confidence and self-efficacy,” alongside advice about research and potential graduate options. Thus, Marjorie was able to practice offering her student constructive feedback and preparing her mentee for graduate school while simultaneously providing helpful information. Similarly, Carmen, a humanities doctoral student, noted that “by assigning regular essay projects, and critiquing my mentee’s work, I now have a taste of what it feels like to be a ‘real’ professor.” Harold, natural sciences graduate student, commented on mentoring was linked to his future professorial work: “I had to balance the time I could spend with the student with other responsibilities. Such lessons in time management must be learned to become a successful faculty member.” Thus, Harold acknowledged the many responsibilities faculty must manage, and that participating in the program provided an early opportunity to juggle these tasks.

Overwhelmingly, participants linked their mentoring to the advising a faculty member might provide; however, these skills are transferrable to other endeavors. Kim, an engineering doctoral student, connected his experience mentoring with broader skill development, noting that “guiding a student to the right path” provided “knowledge of how to become a good leader.” Kelly, an applied science graduate student, wrote that as a mentor, she learned how to “[guide] independent thought without

stifling creativity.” Thus, even if students did not want to pursue a career as an assistant professor, they were able to develop transferrable skills like leadership and supervision, which are important for success in a wide array of professions.

Contribution to Diversity in Academia

Participants also discussed diversifying their field through mentoring. Many mentors articulated beliefs that their discipline would benefit from the contributions of their talented interns. Mentors shared how working with an IE intern of color, female, or first generation collegian and encouraging them to pursue graduate study would not only contribute that student’s knowledge; ultimately their interns would increase diversity in their respective disciplines and fields of study. Mercedes encapsulated this perspective in her reflection:

Serving as a mentor to a first-generation college student and fellow Mexican-American through IE has been one of the most rewarding and challenging experiences I’ve had. In writing [my mentee’s] syllabus, assisting him with the completion of his research paper, taking him to his first national scholarly conference, or even setting up meetings with UT faculty, I too have honed my skills as the type of educator I hope to be and the type of pedagogy I hope to practice. My commitment as a scholar of color and responsibility to other similarly situated students has grown tenfold as a result of my participation in IE.

In addition to giving her an opportunity to practice and develop the skills she would utilize as a faculty member, Mercedes saw her relationship with her mentee as uniquely significant because of their shared ethnic identity and the opportunity this relationship provided her to re-affirm her commitment to promoting diversity in academia, both now and in the future. Similarly, Angela, a social sciences graduate student, discussed both her skill development as a mentor and her commitment to working with students of color like herself in her narrative:

Being a mentor... has given me the tools so that I could reach out to another fellow student of color and guide her through her experiences and the others she will face in the future . . . it was important for me to find a program which would allow me for to bridge the gap between undergraduates and graduates students of color.

Thus, participating in this program allowed students to fulfill a cultural commitment, reaching out to students from underrepresented groups, fostering their achievement and encouraging their entry into, and consequently increased diversity in, graduate education.

While some of the mentors were students of color and saw their engagement with students as ways to reach out to members of their own community and foster diver-

sity in academia, these relationships created opportunities to learn about groups underrepresented in higher education for mentors who did not identify as a person of color. Many mentors shared how they learned about and engaged in conversations about diversity thanks to their relationship with their mentee, like sociology doctoral student Isabella:

I wasn't aware of how minorities or first generation students have a harder time pursuing their personal goals. It is clear for me now that if a graduate student serves as a guide or gives a push to the student, it might be possible that more minorities will go to graduate school. This will change many things. If more minorities have graduate education, they will change the future for their own good and the good of their country.

Isabella's narrative highlights her lack of exposure to individuals from underrepresented groups and knowledge of their educational experiences. It also addresses how her awareness of issues for marginalized students translates to her desire to see graduate education diversified, indicating an ongoing commitment to diversity efforts. Her perspective is similar to that of other White mentors. Bettina, a graduate student in liberal arts, for instance, expressed slight concerns about her mentee's writing, but was "even more impressed" with her mentee's work ethic, given her generational status, and hoped "to have this experience again." Marie, a professional school graduate student who had mentored three IE Pre-Graduate Interns, articulated how her experience had enlightened her to advantages she had in her own educational journey:

I feel very fortunate to be a part of IE, because I have learned at least as much from my three interns as they have learned from me. They have all been first-generation college students and/or from an underrepresented ethnic group, and they have taught me to appreciate my graduate experience in a new way and to not take it for granted. I will always be grateful for the opportunity I have had to inspire and encourage them to look at graduate school as a possibility for them if they work hard and put their minds to it.

Working with interns from underserved groups and engaging in conversations about race and marginality provided insight and perspectives to which they had not previously been exposed – but also demonstrated how feelings of doubt and inadequacy are universal among all students, and how supportive mentorship can alleviate these concerns. Daniella, a biology doctoral student, discussed the linkages she shared with her mentee, Francis:

Francis and I come from different backgrounds but we have a lot in common. Both of us share an interest in science. When I arrived as a freshman, I too questioned my

ability and whether I was UT material. Francis wasn't alone in having doubts.

Mentors discussed how mentoring an underrepresented student moved the discussion about diversity from the abstract to the concrete. In working with a student from a diverse background, mentors actively worked to bring new ideas and experiences to their discipline, engaging new modes of inquiry and areas of study to their fields.

The Past Shapes the Future

The last major theme emerging from the narratives reflected the reciprocal nature of the pre-graduate internship relationship, although the reciprocity was more indirect. Many mentors shared how they engaged in their work because they had received similar guidance and wanted to contribute to this effort for another generation through forming relationships with their own mentees. Therefore, mentors perceived it as personal benefit to be able to contribute to students in the ways in which they had been supported. For example, students like Angelica and Veronica described the importance of mentorship in guiding their own paths, and took their mentoring responsibilities very seriously. Similarly, Bella, a library science graduate student, was inspired by her mentee's "passion and enthusiasm for intellectual work," and in addition to seeing the ways in which they were able to support each other, related her commitment to helping her student to the ways in which she had been mentored and supported throughout her life:

I see this reciprocity – mentor and mentee challenging each other – as the essence of mentorship. I've been fortunate to have good mentors who continue to support me. I take very seriously my responsibility to offer similar support to others, regardless of age.

In addition to being motivated and inspired by her mentee's efforts, Bella perceived the work of mentoring as part of fulfilling an obligation to those who mentored her. Strong mentoring and advising begets more strong mentoring and advising, as Bella reflected, and mentors were intent in ensuring that their mentees benefited from this advantage in their own academic careers.

Alternately, there were some cases where mentors did not receive appropriate mentoring or guidance, and they approached the mentoring relationship to help ensure that future generations did not have the same experience that they had. Ethan, a doctoral student in classics, shared that his mentoring "gave me the opportunity to give a potential future grad student some of the feedback and advice I wish I'd gotten when I was an undergrad." Markus, a doctoral student in the natural sciences, noted that he was able to provide some clarity to the veiled nature of

graduate study to his mentee. "Before I attended graduate school I wasn't sure how a graduate student's day was structured or the responsibilities they had," he noted. "I think shadowing a graduate student has given [my mentee] a much clearer idea of what to expect." Jameela, a doctoral student in liberal arts, discussed how her undergraduate experience influenced her mentoring: "I did not have a mentor when I was an undergraduate... it was not always easy to feel included and accepted," she recalled. "By being part of the internship program... I tried to think of all the questions I had myself as an undergrad and never had answered... I remembered what I had lacked in terms of support." These individuals did not want to perpetuate past mistakes, and chose to foster positive relationships for the future. In contrast to those mentors who had benefited from positive mentorship and wished to pass along those experiences to others, this subpopulation worked to disrupt patterns of misinformation, while unveiling hidden information about networks and pathways that they had themselves learned "the hard way."

Conclusions and Implications

While traditional mentoring models frame developmental relationships as high cost-low benefit relationships for mentors (Ensher & Murphy, 2005), this study suggests that graduate students participating as mentors in the UT-Austin IE Pre-Graduate Internship appear to be engaging in developmental relationships consistent with social exchange principles (Ensher, et al., 2001; Gibb, 1999; Lawler & Thye, 1999; Myers, 1993). IE mentors clearly articulated benefits accrued from relationships with their interns, and saw these relationships as providing resources to which they would not otherwise have access. Thus, these relationships can be understood as reciprocal, based in an exchange of resources that require some cost for benefits. Mentors identified these costs as minimal; therefore, these relationships can be understood as providing mentors to significant "profits."

Consistent with previous research on mentors in business (e.g. Allen, Poteet, & Burroughs, 1997; Ragins & Cotton, 1993; Ragins & Scandura, 1999), Dolan and Johnson (2009) hypothesize that graduate student mentors experience positive emotions. IE mentors revealed that they positively experienced the time spent with mentees. However, rather than describing their appreciation of social support and loyalty described by mentors in business (e.g. Allen, Poteet, & Burroughs, 1997; Ragins & Scandura, 1999; Young & Perrewew, 2000), mentors in the IE internship appeared to most appreciate the insights working with a student can provide in terms of mentors' personal understanding of their own academic journey. The finding suggesting that mentors were able to solidify their understanding of concepts by teaching their mentees

is consistent with Dolan and Johnson's (2009) suggestion that graduate students can enhance their understanding of the content and craft of research thought mentorship; however, a unique addition to this personal benefit was revealed by this study. IE mentors shared that working with their protégés prompted reflection on why and how they made decisions about their career paths, revealing a rarely discussed benefit associated with mentorship: reflection and self-awareness.

Interestingly, graduate mentors identified two personal outcomes associated with developmental relationships that went beyond what they received in terms of resources. First, mentors explained that their developmental relationships with students were a way to pay forward the benefits they received through their own experiences as mentees. This philosophy may partially explain Ragins and Scandura's (1999) findings suggesting those involved in developmental relationships in the past express more interest in participating in these relationships in the future. The second "indirect" benefit graduate mentors described spoke more broadly to their contribution to diversity in higher education. While open to any student, students from underserved backgrounds are highly represented within the IE Pre-Graduate Internship. Graduate mentors, particularly graduate mentors of color, acknowledged that encouraging these students to pursue graduate school could ultimately increase the diversity of the leading thinkers and scholars in their fields. This connection to community mirrors the literature highlighting the cultural commitments of professors of color, often motivated to mentor based on their desire to promote equity in academia (Baez, 2000; Griffin, 2008; Griffin, Pifer, Humphrey, & Hazelwood, 2011; Reddick, 2008).

The benefits associated with mentoring may also be a reflection of the IE Pre-Graduate Internship's philosophy. The findings from our analysis of mentors suggests that these burgeoning academics think in terms of being "citizen-scholars," combining their strengths with those of community partners to jointly accomplish societal objectives. In this way, the mission of higher education is transformed from being a repository of knowledge to being a partner of the larger society with an intellectually adventurous civic orientation (Cherwitz, Sullivan, & Stewart, 2002). Mentors shared writing, teaching, and research opportunities with their mentees, simultaneously accruing professional competencies while helping emerging new scholars achieve their goals to reach graduate school. Mentors either advanced their passion to diversify their academic field, or learned of the need for diversity in academia. In addition to demonstrating citizen-scholarship to undergraduates as Pre-Graduate mentors, it appears that the graduate students in the sample also were being socialized to use their intellect for the common good. These findings suggest that IE provided graduate students the

opportunity to merge scholarship and civic engagement and have an individual impact on society.

In addition to personal benefits and development, the findings of this study suggest graduate students can reap benefits which foster their professional development. Dolan and Johnson (2009) suggest that graduate student mentors can develop their communication and teaching skills, and the findings of this study are certainly consistent with this work. Although not all participants in this study aspired to the professoriate, it is important to connect the experiences they shared and benefits they received in relation to academic socialization, or the process by which students are introduced to and trained about the skills and values of those in the professoriate (Austin, 2002; Austin & McDaniels, 2006; Weidman & Stein, 2003).

While graduate programs appear adept at assisting students in their development of skills and abilities to conduct research, little attention is focused on developing skills necessary to engage in other aspects of a faculty career. Attention has largely been called to improving graduate students' teaching skills and abilities (e.g. Austin, 2002; Slevin, 1992), and the findings of this study suggest graduate students may be able to develop some of these skills through their mentoring relationships with undergraduates – for instance, Mark's statement that he better understood principles in his field by teaching details to his mentee, and Carmen's observation that through evaluating her mentee's assignments, she was able to pick up needed skills for the professoriate. Mentors explained that working with their protégés challenged them to clearly articulate key ideas and principles in their respective fields, teaching students academic and research skills much in the way professors would work with their own students – in Laura's words, replicating the "main component of an assistant professor position." Thus, offering graduate students the opportunity to mentor undergraduates may serve as an important teaching opportunity, preparing students for future academic careers.

If teaching is given limited attention in the academic socialization process, training to engage in service-related professional responsibilities is virtually ignored. Johnson (2003) highlights the importance of not only cognitive and intellectual abilities in developmental relationships; mentors must also have strong emotional (e.g., emotional balance, competence, and awareness) and relational (e.g., capacity for intimacy, communication skills, empathy) abilities to be effective. Early career faculty report that while graduate school offers great scholarly preparation, there is little guidance regarding mentoring responsibilities. These faculty often find that student demands for support outside of the classroom exceed their expectations and are a source of stress (Berberet, 2008). Given the potential that over-engagement with students has to draw time away from a professor's own research (Tierney

& Bensimon, 1996), it may be particularly important for graduate students to learn how to mentor and advise in ways which are beneficial for students, but not personally detrimental holds great importance. Further, developing competency in mentorship is likely to yield better student outcomes (Bennetts, 2002; Johnson, 2002, 2003). Thus, attention must generally be paid to creating opportunities to offer graduate students training in how to mentor and advise students and develop emotional competence (Johnson, 2002; 2003); and it appears that serving as mentors while graduate students may be an important opportunity to learn and develop these skills, provided that mentors keep the lines of communication open and reflect upon these experiences.

Finally, consistent with graduate students' views on diversifying higher education, mentors could benefit professionally from what they learned about their mentees about other cultures and backgrounds. While this could be understood as a benefit, research suggests opportunities to learn from diverse peers promote development and learning (see Milem, 2003 for a review). Scholars have considered how institutional leaders can facilitate opportunities for engagement across difference, promoting students' ability to understand perspectives other than their own, critically consider problems and develop creative solutions, and work effectively in diverse teams. While proposed strategies often address interactions between students or faculty and students, it has not been considered how developmental relationships between graduate student mentors and their undergraduate mentees could potentially promote interactions with diverse peers. Future work should explore whether positive educational outcomes associated with interactions with diverse peers apply in the case of graduate-undergraduate mentor dyads, and whether they can serve as a means to prepare graduate students for the diverse student communities they will ultimately work with if they enter the professoriate.

While mentoring can indeed be time consuming, it appears that in many cases that costs are outweighed by the benefits, particularly in terms of academic socialization and preparation to enter academic careers. Thus, as undergraduate programs with a mentoring component are developed, it is important that program directors consider recruiting graduate students to these positions, perhaps by highlighting the personal and professional development that can take place within these experiences. Further, graduate program deans and directors should more strongly consider how they could potentially institutionalize efforts to expose graduate students to mentoring experiences by providing structured opportunities to mentor undergraduates, with sufficient training and support to facilitate graduate student learning and development.

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Appendix A: IE Pre Graduate School Internship Approval Form



INTELLECTUAL
ENTREPRENEURSHIP

Pre-Graduate School Internship Approval Form*

Please circle the course you wish to enroll in: CMS 164M CMS 264M CMS 364M

Student's Name: _____ UTEID: _____

Student's Major: _____

Student's E-mail: _____ Phone #: _____

Internship Semester/Year: _____

Graduate Internship Program: _____

Are you an underrepresented minority (defined as African American, Hispanic or Native American)? Y N

Are you a first-generation college student (defined as neither parent graduated from college)? Y N

Faculty Supervisor: _____

Address: _____ Phone #: _____

E-Mail: _____

Graduate Student Mentor: _____

Address: _____ Phone #: _____

E-Mail: _____

Description of Internship Duties, Responsibilities and Assignments (to be agreed upon by student and faculty supervisor/graduate student mentor):

Intern's Signature

Faculty Supervisor's Signature

Graduate Student Mentor's Signature

After completing the form, with all signatures, please hand-deliver or send it to:

Rick Cherwitz, Professor
Communication Studies
1 University Station, A1105
Austin, TX 78712

CAMPUS MAIL ADDRESS:
CMA 7.228, A1105
(FAX) 512-471-3504
mail to: spaj737@uts.cc.utexas.edu

*Once Dr. Cherwitz has received this form, he will inform the Communication Studies undergraduate advisor that you may be cleared to enroll in CMS 164M, 264M, or 364M. Please return this form as soon as possible, but no later than the fourth class day of the semester in which the internship will be undertaken.