

## Adaptive Undergraduate Research Mentoring in a Constellation Model

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### Introduction

Collectively, we have been through significantly challenging circumstances in the last ten years, which has led to turbulence, uncertainty, and heightened stress in our daily lives, as well as in our academic and research work. These events range from major natural disasters, a pandemic, contentious politically charged events, to racial and social injustices, to name a few. In one study, a majority of college student participants reported that their stress and anxiety levels had increased during the pandemic, and nearly half showed moderate-to-severe levels of depression (Wang et al., 2020). Similarly, after a recent U.S. presidential election, nearly a quarter of students met criteria for clinically significant event-related distress symptoms (Hagan et al., 2020). Certainly, these recent events have heightened university administrator and faculty awareness of college students' well-being, but we have long known college students are a vulnerable population who are tasked with navigating systemic deficiencies within institutions of higher education (Balon et al., 2015).

Most college students are in their late adolescence or early adulthood, which is in itself a vulnerable age range, as this is the time many people experience their first episode of serious mental disorders (Blanco et al., 2008). Alarming, one study reported nearly half of U.S. college-aged students experienced a psychiatric disorder in the last year (Blanco et al., 2008), but few students receive the support they need (Balon et al., 2015). Many college campuses struggle to meet the demands for mental services on campus, and thus leave a large number of students fending for themselves. Coupling all this with inconsistencies in mental health supports due to gaps in medical insurance, academic breaks throughout the year, as well as student reluctance to seek help due to concerns about the stigma of having a recorded mental illness in their academic record, the state of mental health on college campuses seems even more dire (Balon et al., 2015).

So, how can faculty better support students' wellbeing, as well as their academic and socioemotional development? One promising avenue is through mentoring relationships. A study of over 30,000 U.S. college graduates found that alumni who reported having a mentor in college were more likely to be engaged in their jobs and "thriving" in their well-being (Gallup, 2014). However, in that study, only two in 10 people strongly agreed they had a mentor, someone who cared about them and encouraged them to reach their goals. In results of a more recent poll, 55% of over 1,800 U.S. college graduates reported having meaningful relationships with faculty and staff, and 69% had meaningful relationships with peers (Moore et al., 2022). Interestingly, 60 percent of students reported meeting their most influential faculty or staff mentors in their first year, signaling the need for early opportunities to identify mentors. Felten and Lambert (2020) offer sweeping evidence, based on hundreds of interviews with administrators, faculty, staff, and students from institutions across the country, for the power of relationships to support and enhance students' success in

higher education. They assert that all students should “create webs of relationships that will sustain them through, and beyond, college” (Felten & Lambert, 2020, p. 6).

Indeed, a significant body of research indicates that students who experience high-quality mentoring have favorable outcomes, varying from increased proficiencies in skill sets and personal confidence to better networking and professional opportunities. Mentored students have higher GPAs and persistence in college, report enhanced belonging and engagement with their institution, and develop professional identities and clarity about career goals (e.g., Baker et al., 2022; Crisp et al., 2017; Russell et al., 2007; Vandermaas-Peeler et al., 2018).

### Mentoring Definitions and Models

Despite the attention that mentoring relationships have received in higher education research, scholars and practitioners fail to agree on a shared definition of mentoring. In their comprehensive review of mentoring studies, Mullen and Klimaitis (2021) noted that despite this lack of agreement, most definitions include relational, developmental, and dynamic characteristics. Mentoring relationships are sustained over time, promote learning and development through guided reflection, and adapt to new contexts, skills, and identities (Johnson, 2016; Mullen & Klimaitis, 2021).

A common typology of mentoring approaches utilizes the foundational work of Kathy Kram (1988), who characterized mentoring as *instrumental*, supporting career and professional, goal-oriented activities and skills, and *psychosocial*, supporting interpersonal, emotional, and identity development. More recent *relational* approaches acknowledge the reciprocal, interdependent nature of mentoring relationships (Fletcher & Ragins, 2007). Relational qualities of mentoring relationships include *authenticity*, the development of self-knowledge and trust; *mutual engagement*, shared involvement and commitment; and *empowerment*, encouragement to take action (Liang et al., 2002).

Mentoring relationships can be conceptualized as a web or constellation, rather than an archetypal hierarchy with one mentor designated as the expert who imparts knowledge to a less experienced novice. A mentoring constellation model, defined as “the set of relationships an individual has with people who take an active interest in and action to advance the individual's career by assisting with his or her personal and professional development” (Higgins & Thomas, 2001, p. 224), acknowledges the realities and complexities of social relationships (Sorcinelli & Yun, 2007; Vandermaas-Peeler & Moore, 2022). A mentoring constellation is ideally comprised of multiple mentors, including near-peers, faculty, staff, and community members, among others, who support specific domains of development, such as personal, social, cultural, and academic (Sorcinelli & Yun, 2007; Vandermaas-Peeler, 2021a, 2021b; Yip & Kram, 2017). Mentors play a significant supportive role in one or more areas, but no one mentor is expected to serve all mentoring functions.

In research on mentoring relationships at work, scholars have identified two important aspects of mentoring constellations, including the *diversity* of the network, defined by the mentors' roles and social connections, and the *strength* of the relationships, encompassing communication, reciprocity, and emotional closeness (Higgins & Kram, 2001). Johnson et al. (2013) developed a Competence Constellation Model, or a cluster of relationships designed to support the well-being and professional competence of psychologists, including colleagues who monitor emotional health and wellness as well as professional capacities. A mentoring constellation model affords opportunities for multiple mentors to support well-being through adaptive mentoring. Potentially, multiple mentors in a constellation would recognize that their mentees may need different types of support during challenging times. However, no known research has examined this model in undergraduate education.

Our institution, Elon University, a mid-sized private university in the United States that enrolls approximately 7,000 students in over 70 undergraduate degree programs and nine graduate programs, is recognized for engaged teaching and learning (Felten & Lambert, 2020). A new strategic plan centers mentoring as foundational to student success. While mentoring is already a well-supported activity that is enfranchised in the campus culture (e.g., through a teacher-scholar model and funding structures for curricular and co-curricular initiatives), the new vision conceptualizes mentoring as a complex web of relationships with multiple mentors rather than a more traditional one-to-one hierarchical model. This strategic plan sets forth an ambitious agenda:

*Through a groundbreaking mentoring model, students will learn to build developmental networks that include peers, staff and faculty, as well as others beyond the university.*

*This lifelong constellation of mentors will emerge as a hallmark of an Elon University education, engaging **all students** in developing essential skills and fluencies – writing, speaking, creative problem solving, collaboration, intercultural learning, data competency, media literacy, ethics, and personal and professional agility.*

The institution participated in an American Council on Education’s (ACE) Learner Success Lab in 2020-2022 to conduct a comprehensive self-study of existing mentoring practices on campus and develop preliminary recommendations as a foundation for strategic planning and implementation. As a result of an extensive literature review and research for the self-study, with iterative feedback from students, faculty, and staff, we developed the following definition of mentoring relationships within a constellation model:

Mentoring relationships are fundamentally developmental and learner-centered. Within Elon University’s relationship-rich campus environment, mentoring relationships are distinct from other meaningful relationships (e.g., Mullen & Klimaitis, 2021) in that they:

- promote academic, social, personal, cultural, and career-focused learning and development in intentional, sustained, and integrative ways (e.g., Kram, 1988; Crisp et al., 2017);
- evolve over time, becoming more reciprocal and mutually beneficial (e.g., Fletcher & Ragins, 2007; Ketcham et al., 2018); and
- are individualized, attending to mentees’ developing strengths and shifting needs, mentors’ expertise, and all members’ identities.

Although mentoring sometimes is conceptualized as a one-to-one hierarchical relationship, mentoring relationships function within a broader set of relationships known as a mentoring constellation (Sorcinelli & Yun, 2007; Vandermaas-Peeler, 2021a). The number and nature of specific relationships within these mentoring constellations vary across individuals, time, and contexts, with different mentors and peer mentors offering varied forms of support and expertise. As a result, mentors will play significant roles serving one or more functions, though few mentors will serve all mentoring functions.

Certainly, many different types of student support can be offered through skillful mentoring approaches and practices, and the constellation model offers unique opportunities for faculty and staff to collaborate in supporting a student’s holistic well-being. A potential role for a mentor in this model is a connector, someone who helps the student access resources such as counseling support. However, not all faculty are trained or prepared to engage in mentoring relationships with students (Baker et al., 2022), and most faculty are not trained counselors and may be reluctant to offer

socioemotional support to their students during recent turbulent, stressful, and uncertain events. Indeed, developing relationships with students that emphasize instrumental and psychosocial support is time-consuming, emotionally demanding, and potentially stressful (Lunsford et al., 2013). However, when students and faculty envision mentoring relationships as mutually beneficial, evolving over time, and taking place within larger frameworks of broader mentoring constellations, they can enhance opportunities to support learning and development for mentees *and* mentors. For example, Hall and colleagues (2018) found that for many award-winning mentors, observing the impact of mentoring on their student mentees helps engage and motivate mentors to enhance research productivity and helps the mentors feel valued and recognized for their successful mentoring practices. Benefits were also derived from team-based mentoring approaches, which created opportunities for both mentees and mentors to learn from other mentors during opportunities for shared skill development or collaboration (Hall et al., 2018). As mentoring initiatives in our institutional strategic plan develop, we will have a unique opportunity to learn more about how constellation models support faculty and student well-being and to identify gaps or challenges in the campus ecosystem.

### **Adaptive Approaches to Mentoring Undergraduate Research**

Adaptive mentoring within a constellation model involves recognizing that mentees will need distinctive types of support over time, and from different mentors in their constellation. During times of challenge or uncertainty, it is likely mentees would need more psychosocial and relational support. Engaging in research is inherently uncertain. We conduct research because we do not know the answer to our questions. Brené Brown, a well-known vulnerability and shame researcher, defines vulnerability as uncertainty, risk, and emotional exposure. She has said, “Choosing to be curious is choosing to be vulnerable because it requires us to surrender to uncertainty” (Brown, 2015, p. 52). Certainly, research mentors have experience in the field and know how to design and conduct studies, but several aspects of research, such as the results of a given study, remain uncertain even to seasoned researchers. Further, given recent disruptions surrounding the pandemic, many principal investigators, especially early career faculty, may have felt uncertain about many changing processes of conducting research, including how to access research participants, secure funding, and find time to write (Levine et al., 2021). On top of the uncertainty and stress felt by mentors, research mentees are often learning each step of the research process for the first time, thus socioemotional supports associated with adaptive mentoring approaches become even more important during challenging times (e.g., Hall et al., 2021).

In order to provide scaffolded mentoring across multiple dimensions and contexts of undergraduate research, researchers have developed the "Ten Salient Practices Framework" (Shanahan et al., 2015). The salient practices (SPs) emerged from an extensive literature review on mentoring undergraduate research as part of an Elon University Center for Engaged Learning’s multi-year, multi-institutional seminar on Excellence in Mentoring in Undergraduate Research. The practices elucidate important behaviors which are central to high-quality undergraduate research mentoring (Shanahan et al., 2015; see Table 1). While the salient practices begin with pre-planning and end with public dissemination of findings, they do not necessarily have to be completed in order, and they must be tailored to individual students, projects, and situations. In the coming sections, we zoom in on three practices which may be most helpful to use during times of uncertainty and stress—SP 4-6 (shown in bold in Table 1)—as they involve the most psychosocial and relational support in an adaptive mentoring approach.

#### **SP 4. Balancing Rigorous Expectations with Appropriate Emotional Support**

Conducting research is a vulnerable process, and students are constantly asked to take risks in their work. Our mentoring experiences have made clear to us that every step in research presents new challenges that could lead even long-standing research students to experience dips in confidence,

Table 1. *Ten Salient Practices of Undergraduate Research Mentoring*

1	Strategic pre-planning to support students' varying needs and abilities during research process.
2	Setting clear and well-scaffolded expectations.
3	Teaching the technical skills, methods, and techniques of conducting research in the discipline.
4	<b>Balancing rigorous expectations with appropriate emotional support.</b>
5	<b>Building community among groups of students or a research team.</b>
6	<b>Dedicating time to one-on-one mentoring.</b>
7	Increasing student ownership over time.
8	Supporting students' professional development.
9	Creating intentional, ladder opportunities for peers/near-peers to learn mentoring skills.
10	Encourage students to disseminate their findings.

Note: Please see <https://www.centerforengagedlearning.org/salientpractices/> for more information about the framework.

shame surrounding asking for help, and procrastination due to perfectionism. Unfortunately, students may face these challenging emotions on their own, as many barriers exist when it comes to help-seeking. For example, students from historically excluded or marginalized groups, who more often experience disconnecting and isolating behaviors such as prejudice and discrimination, may be even less likely to ask for help when they need it (Hammer et al., 2014). Known deterrents from academic help-seeking behaviors include limited self-awareness skills, experiencing shame in past help-seeking instances, fears of rejection, confirming a negative stereotype, or revealing ineptitude or weakness (e.g., Brown, 2010; Ciscell et al., 2016; Steele et al., 2002; Winograd & Rust, 2014). The following adaptive mentoring strategies are suggested in support of SP 4.

#### *Building in Opportunities for Reflection*

Many of the difficulties students encounter during UR experiences may be unknown to their mentors unless we specifically create opportunities for close communication. Written reflections facilitate deeper learning and enhance critical thinking skills by improving students' comprehension of what they are learning and how to apply it in the future (Ambrose et al., 2010; Dietz-Uhler & Lanter, 2009). We can make space for mentees to process their emotions and experiences through more personalized or relational methods of supporting their progress and well-being, such as journaling activities and focused mentoring conversations. Behind every research presentation or manuscript is a human being who exerted a tremendous amount of effort to complete various stages of a research process. Personalized approaches to teaching and mentoring can acknowledge the human behind the academic work (e.g., Rendón, 2008). For example, in our labs, we assign weekly journals where mentees are asked to reflect on the past week's trials and triumphs. In their journal entries, students have often brought up struggling with imposter syndrome, lacking confidence in certain areas of research (e.g., behavioral video coding), feeling very nervous about trying new research-related tasks, being overwhelmed, and so forth. These honest reflections have helped us identify ways we can support them through adaptive mentoring in a more tailored way, which often leads to in-depth conversations about the concerns they brought up in their journals, focused advice centered on specific challenges they were facing, and following up with students to monitor their progress. Having a record of journal entries throughout the semester (or year) also makes for an incredibly powerful experience when students look back on their experiences and see how far they have come. We ask them to reflect on that, too, and the results are of course much more positive over time! These opportunities to reflect can be a powerful way to get to know our mentees' inner emotional worlds, and there are ways we can support them by sharing our own emotional experiences with them, too.



### *Sharing in Vulnerability*

Engaging in shared vulnerability is a salient feature of relational mentoring (Johnson et al., 2013; Johnson et al., 2014; Ragins & Kram, 2007). By modeling emotional vulnerability, authenticity, and willingness to accept uncertainty in our academic work, we put ourselves at risk, and show students how to do the same (Brueggemann & Modellmog, 2003). Giving considerable thought to our own approachability in this way can help students feel more at ease in working with us. We can do this by sharing our passions for our fields as well as some personal information, and how those intersect within us (hooks, 1994; Palmer, 1997). For example, in the context of undergraduate research, we may share strategies for how we work through academic rejections of our own scholarship, or have discussions about our difficulties with writing, etc. These strategies humanize all parties and promote intentional blending of instrumental, relational, and psychosocial mentoring in authentic contexts.

When it comes to modeling emotional vulnerability and authenticity, faculty sometimes worry about maintaining professional boundaries. Therefore, it could be helpful to discuss the differences between modeling healthy versus unhealthy emotional vulnerability. Healthy emotional vulnerability involves building trust and connections with your mentee in a way that helps move them or the work forward (e.g., Brown, 2010; 2015). It is important only to share personal struggles or vulnerabilities once they have been settled or resolved, and when they can be discussed from a place of mental strength (i.e., reframing adverse experiences as learning opportunities). Unhealthy vulnerability, on the other hand, often involves dumping concerns onto others in an effort to unburden ourselves. And these unresolved concerns are usually unloaded before we have been able to thoroughly process them ourselves. Certainly, sharing in healthy vulnerability with our students has the power to make a meaningful impact. There are also other ways we can support mentees by simply listening to them.

### *Hearing Students to Speech*

Listening and speaking to our mentees is an interactive and bidirectional process in which we co-create relational space to effectively express and clarify our ideas (Hartling, 2005). It seems so simple that the act of listening to another person in a respectful way can help them express their ideas more clearly, but this can sometimes be a challenging skill in practice. Academic cultures of busyness, time crunches around research deadlines, and strained cognitive and emotional bandwidth can limit our ability to really listen. If we engage more empathetically and whole-heartedly, we can better understand our mentees and will know better how to adapt our mentoring to their needs. The process of “hearing another to speech” involves raising our awareness of the other person, making space for them to express their ideas, and honoring what they share, even if it is not what we want to hear (Morton, 1985; Palmer, 1997). By intentionally creating these spaces with our mentees, we support a context of collective curiosity and collaboration (Hammer et al., 2014; Hartling, 2005; Palmer, 1997). In some cases, collaborative experiences developed in this way can extend beyond the mentor-mentee duo and extend more broadly to an entire group of students or research team.

### **SP 5. Building Community among Groups of Students or a Research Team**

Helping students envision themselves as a member of a larger community or research team can improve work ethic, confidence, and productivity (e.g., Overman, 2019; Vandermaas-Peeler et al., 2018). When it comes to helping students share vulnerabilities, accept uncertainties, and show resilience in the face of obstacles, it is important to consider ways to intentionally build trust among the group. For example, research in our field of psychology is highly collaborative and thus team models are emphasized (Thurman & Vandermaas-Peeler, 2022). We have on numerous occasions joined our labs together for larger, themed open discussions so that students experience greater support from each of us, and from each other through peer mentoring, encouragement, and solidarity.

### *Openly Discussing Uncertainty and Common Difficulties*

Many students struggle with burnout, a fear of failure, perfectionism, and lack of confidence, but they often have a sense that they are the only person who feels that way (Jaremka et al., 2020). However, one recent systematic review concluded that prior reports revealed up to 82% of people face feelings of impostor phenomenon (Bravata et al., 2020), which involves failure to internalize one's accomplishments, persistent self-doubt, and fear of being outed as a fraud or imposter. Across many studies, the prevalence of impostor phenomenon was particularly high in ethnic minority groups (Bravata et al., 2020). Discussing common difficulties and negative feelings openly destigmatizes them, which improves help-seeking behaviors and ultimately could aid in overcoming them (Jaremka et al., 2020). In line with this thinking, our labs recently explored these themes by engaging in a book club discussion of Brené Brown's *The Gifts of Imperfection*. The book challenges readers to explore "ten guideposts" of improving self-acceptance and our own ability to live and connect authentically (Brown, 2010). We coupled this discussion with an American Psychological Association *Monitor on Psychology* article on how to overcome impostor phenomenon (Palmer, 2021). In the article, Palmer argues that conversations about overcoming challenging obstacles such as impostor phenomenon can certainly be improved through personal development, but it is also important to recognize oppressive institutional structures that affect students from underrepresented backgrounds in the academy (Palmer, 2021). The conversations we had with students about these topics were deeply vulnerable and helped us connect to our mentees in ways we had not previously achieved. Importantly, these transformative team-building efforts are best supported when mentors also dedicate time to building interpersonal trust through one-on-one mentoring.

### **SP 6. Dedicating Time to One-on-One Mentoring**

When we meet with students individually, we usually have uninterrupted, personalized time to focus on getting to know them, guiding and supporting them, and valuing what they offer to the relationship. Opportunities for these kinds of individualized, personal connections with mentees—psychosocial and relational mentoring—can have a powerful long-term impact on students' professional identity development, and also on mentors themselves.

### *Self-Authorship*

Mentees' identity development is part of the professional socialization process. Through one-on-one mentoring and learning in scientific inquiry, students' identity development and ability to engage in self-authorship is supported. Self-authorship involves defining one's own identity and personal values and using them to guide decision-making (Baxter Magolda, 1999). After engaging in undergraduate research, mentees often report gains in general self-confidence, professional confidence, and confidence in their ability to contribute to science (e.g., Hunter et al., 2007; Thiry et al. 2012). For underrepresented minority students, this broadened their future career and educational possibilities (e.g., Thiry & Laursen, 2011). It is important for underrepresented students to gain experience with scientific role models, receive academic as well as personal and emotional support, and have structured opportunities for identity exploration and development. Morton (2019) suggests mentors to facilitate opportunities that encourage students to identify connections between their personal identity and values and their academic experiences, which could include experiences such as undergraduate research involvement. Bridging home and academic environments can help students navigate their multiple social and cultural identities (Shanahan, 2018). Such reflections could help students make connections between communities they care about, their undergraduate research experiences, and how they may intersect with their post-graduation goals. Supporting students in self-authorship can be facilitated by having mentors who also intentionally engage in tapping into their own authentic ways of aligning their professional lives with their personal identities and values (e.g., hooks, 1994; Rendón, 2008).

### *Emphasis on Mutuality and Reciprocity*

Unfortunately, a mentor's ability to model vulnerability and self-authorship or engage in true collaborations with a mentee may be limited, as mentoring relationships are often conceptualized as a one-to-one hierarchy and are riddled with power dynamics (Fletcher & Ragins, 2007; Hammer et al., 2014). Further, during times of stress and uncertainty, problematic mentalities such as scarcity mindset may become exacerbated. Scarcity mindset leads those who experience it to feel preoccupied about the lack of resources available to them, making them compelled to interact with others in avoidant or aversive self-protective ways (Covey, 1991). In research, scarcity mindset may manifest through feeling like there is not enough time to invest into the mentor-mentee relationship, being preoccupied with limited research funds or opportunities, or feeling like outputs of the research work are not enough in quantity or quality (e.g., publications, presentations). Mentors or mentees who have a scarcity mindset may find it even more challenging to show healthy vulnerability and open themselves to mutual and reciprocal growth by withdrawing into themselves during stressful times as a form of self-protection (e.g., Covey, 1991). When we disconnect from students, we also disconnect from our research, and ourselves, which further exacerbates our own isolation (e.g., Palmer, 1997).

The alternative to feeling preoccupied with scarcity instead cultivates a mindset that resources are abundant, thereby promoting generosity, healthy vulnerability, and interpersonal connections (Covey, 1991). In accordance with relational mentoring, this may apply to mentoring relationships through mutuality, which refers to a perception that the relationship is shared, and reciprocity, which means both parties give and receive benefits from the relationship. When we bridge gaps between our mentees and ourselves and use our professional capital to empower them, we shift from a power-over stance to a power-with stance (Miller, 1976; 1991). It is important to recognize that we have much to gain from our mentees (e.g., Hammer et al., 2014; Johnson, 2016; Longmire-Avital, 2019; Miller, 1976; 1991; Shanahan, 2018). Their insight, energy, and enthusiasm can renew our own motivation to persist during challenging times (Palmer, 1997). Mentors modeling an abundance mindset also could support students in building interpersonal connections outside of our mentoring relationships with them.

### *Supporting Students in Building a Constellation of Mentors*

Promoting student's self-authorship and abundance frames of mind could help mentees feel empowered to build a constellation of mentors. Building relationships with multiple mentors who offer differing types of support can help students navigate uncertainty and personal challenges, but also build strengths and competencies. By rejecting the idea that one mentor can fill all roles for them, students can build agency in learning how to help themselves curate relationships for different needs.

This is particularly important for students from historically underrepresented or marginalized communities because finding undergraduate research mentors with similar, multiple overlapping identities may be challenging. Faculty within institutions of higher education do not represent wider populations proportionately, and faculty from historically underrepresented racial or ethnic backgrounds are often over-tapped for service roles and overloaded with a disproportionate number of mentoring relationships (e.g., Dixon-Reeves, 2003). Thus, students may not be able to secure mentoring relationships based on specific shared identity characteristics. However, research suggests prospective mentees who face these challenges are strategic and develop sophisticated methods of securing their own constellations of mentors (Demetriou et al., 2017; Dixon-Reeves, 2003; Patton, 2009). For example, successful first-generation college students and Black academics frequently report having multiple mentors (Demetriou et al., 2017; Dixon-Reeves, 2003). Specifically, Black women report receiving instrumental support from traditional mentors within their organizations but rely on their own group affiliations for psychosocial mentoring, which is also crucial



for career success (Bova, 2000; Dixon-Reeves, 2003). Mentors may also be sourced from outside the academy. Their value to their protégés stems from their qualifying life experiences, important shared identity characteristics, and the fact that they are a powerful source of career motivation (Patton, 2009). If research mentors do not share one or more aspects of their mentees' identities, the constellation model offers the benefit of other identity-linked mentors.

### **Conclusion**

Engaging in mentored undergraduate research inherently requires us to lean into uncertainty as we attempt to generate new knowledge in one or more disciplinary contexts. Conducting undergraduate research can present challenges for students, who may already experience difficulties in academia due to their vulnerable time in development, self-limiting frames of mind, or even isolation or marginalization due to their identity characteristics. In undergraduate research mentoring, these challenges can be mitigated by mentors' intentional efforts to provide emotional support, build community among research teams, and dedicate time to getting to know their mentees. When mentors balance relational mentoring with instrumental and psychosocial support, students will learn necessary skills and knowledge, build confidence in their developing identity as a scholar, and gain insights about the strengths they offer to their current and future mentoring relationships. This personal knowledge can empower students in building constellations of mentoring relationships to support them in navigating personal and academic obstacles across multiple contexts.

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