

# Cultivating a Culture of Mentoring: A Multi-Level Training Model at the University of Arizona

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A university-wide mentoring training was created to shift the culture to high-quality mentoring and to increase mentoring for students and faculty while using evidence-based mentoring practices. The training begins with Level 1, a one-hour asynchronous training designed to reach mentors and mentees with the same content. Next, the Level 2 one-hour synchronous training focuses on interactive and reflective activities based on the Level 1 content. This training was created partly in response to NIH and NSF requirements for mentoring training and was launched campus-wide in August 2023 after a year and half of development including input and feedback from key constituent groups. This innovative mentoring training emphasizes the following key aspects that distinguish it from other mentor training programs: (a) developmental mentoring networks, or a “mentor universe,” (b) the importance of collaboratively creating mentoring agreements for alignment and accountability, and (c) interweaving a humanistic model of mentoring as a philosophical foundation. The training is aimed primarily at faculty, graduate students, and postdoctoral scholars, and promotes evidence-based mentoring practices with an emphasis on career advancement, academic milestones, and increased belonging to academia. Grounded in relational-cultural theory and humanistic mentoring, the program promotes mentoring based on alignment, clarity of expectations, mutuality, empathy, reciprocity, and authenticity while focusing on career and professional development. Following the launch of mentoring training modules, data from 1,482 participants and 936 survey responses revealed strong positive impacts across three core areas: Mentoring Agreements & Strategic Planning, Mentoring Universe, Humanistic Mentoring, Impact of Mentoring, and Effectiveness of Training. After the Level 1 mentoring training, 78% reported awareness of mentoring agreements/planning tools. 95% gained insight into mentoring roles and career development. Over 94% valued humanistic mentoring and improved communication. More than 86% believed training enhanced belonging. Lastly, over 95% found the training useful, engaging, and would recommend it to others.

*Keywords:* Mentoring training program, higher education, mentor universe, mentoring agreements, humanistic mentoring

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## Introduction

While it is well-known that mentoring is key to academic and career success, there is often little to no training for quality and evidence-based mentoring, particularly in higher education. In addition, mentoring is too often seen as an additional service activity that receives little to no acknowledgement. Furthermore, there is evidence that individuals who do not reflect the demographic status quo of the university are often less likely to receive mentoring at all (Harris

& Ogbonna, 2023). Thus, there is a need to create a shift in the culture of mentoring within higher education, to increase best practices, involvement, and recognition of mentoring. This need has been noted by many students and faculty alike, and most recently by the National Science Foundation and the National Institutes of Health in the requirement that universities must have university-wide training for mentors in order to continue receiving federal funding. More specifically, for the United States to continue its competitive edge in research and science and to be innovative in

the STEM fields, the National Science Foundation (NSF) implemented a new expanded mentoring requirement for all grant submissions (Palmer, 2024). In addition, the National Institutes of Health (NIH) strongly encourages the use of Individual Development Plans and often requires a mentoring plan for grant submissions. The NIH emphasizes the importance of mentoring training, even outlining several key mentoring competencies such as aligning expectations, maintaining effective communication, and articulating one's mentoring philosophy and plan (National Institutes of Health, 2019). As such financial support was provided to the Office of Faculty Affairs to lead the creation and implementation of a university-wide mentoring training for faculty and graduate students; funding was provided by senior leaders within the Office of the Provost and the Office of Research and Partnerships at the University of Arizona (U of A). This project was expanded to create the MENTOR Institute that houses not only mentoring training, but also mentoring awards, mentoring peer community programs for a) promotion and b) campus leadership, and the MENTOR Fellows program that fosters a mentoring community of practice across the institution. The intent of the evidence-based training was to offer a university-wide training that was concise to ensure that as many faculty and graduate students as possible would complete the training within two years. This was done in order to intentionally shift the mentoring culture across campus for all faculty and graduate students well beyond those who participate in seeking federal funds.

The training was developed with the leadership in Faculty Affairs and the MENTOR Institute through a systematic approach that included the following: (1) review of existing published literature on mentoring, (2) working closely with a campus-wide advisory group of experts on mentoring, (3) learning from the University of New Mexico Mentoring Institute with their consultation, and (4) reviewing and analyzing key factors included in national mentoring programs, such as CIMER (Center for the Improvement of Mentored Experiences in Research) and NRMN (National Research Mentoring Network). This led to the development of training that is unique not only in terms of training that is relevant to both mentors and mentees, faculty and graduate students, but also in terms of the amount of time required. Additionally, it includes key new concepts rooted in humanistic mentoring, such as the mentor universe, cycles of mentoring, and more. To do this effectively, this training spotlights the mutual benefits that mentoring has for both the mentor and mentee and the importance of it being a collaborative effort through each of the four stages of the mentoring process. In short, the three following themes are addressed and then assessed: (a) developmental mentoring networks, or a "mentor universe," (b) the importance of collaboratively creating mentoring agreements in order to align expectations and build accountability, and (c) interweaving a humanistic model of mentoring as

a philosophical foundation that incorporates the whole person for both mentors and mentees.

## Literature Review

The structure of the training is rooted in mentoring theories and frameworks. This training utilizes relational mentoring as a framework for enacting all the different types of mentoring relationships within a mentor universe (Gammel et al., 2017). This framework draws heavily upon the relational-cultural theory (RCT) which encourages growth-fostering relationships through social connection, mutuality, authenticity, reciprocity, and empathy (Lewis & Olshansky, 2016). Relational mentoring emphasizes the reciprocity of a mentoring relationship which becomes more bilateral, when both mentor and mentee are teaching and learning, rather than unilateral, when the mentor pours everything into the mentee (Gammel et al., 2017). The benefits for the mentoring partnerships and communities that utilize this mentoring model include academic and career success and a higher sense of belonging both for faculty and graduate students. Individuals who participate in this mentoring model have higher career satisfaction and the institution at which they work has better retention rates due to improved outcomes for promotion and tenure (Massner et al., 2023). In a similar study it was found that doctoral students, as they progressed through their program, can have feelings of isolation and limited support; however, using a peer mentoring model that draws upon relational mentoring can build cohesion and support for a cohort of students (Rujimora et al., 2024). This again helps participants to feel connected, leading to higher retention rates.

While relational mentoring is the philosophical framework for the training, the foundational grounding theory is the Humanistic Mentoring Model which focuses on the shared human relationship of the mentoring interaction. This model focuses on the whole person and the mutual benefits of mentoring for the mentor and mentee through the following four key principles: 1) Mentoring partnerships not only focus on roles, but importantly include all dimensions of the mentor's and mentee's identity and experience, 2) An important component of mentoring partnerships is affect and emotion, 3) The mentoring partnership is the responsibility of both mentor and mentee and is sustained through their reciprocal influence, and 4) It is morally imperative for both mentor and mentee to remain professional in the relationship (Schirmer & Osterberg, 2021).

To begin with, the importance of going beyond the traditional 1-1 mentoring partnerships to include a variety of mentoring models such as peer mentoring, group mentoring, and other collaborative forms of mentoring is introduced through the model of developmental networks in higher education. This is framed through the concept of a mentoring constellation which is defined by Phillips and Dennison (2023) 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 their personal and professional development." This was taken a step further to emphasize not only 1-1 mentoring, but also peer group or community mentoring, and that a mentor universe encompasses not only those individuals that an individual is mentoring, but also those who are mentoring them, including peer mentoring communities. As such, it centers the individual as both a mentor and mentee and emphasizes the need for multiple mentors across the career lifespan and the need over time for those mentoring relationships to evolve. Using this concept with the term "mentor universe," faculty and graduate students are encouraged to incorporate a variety of mentoring relationships and models in order to meet their career and academic goals, keeping in mind that their needs will change over the course of their career. To do this effectively, the training defines the different types of roles a mentor might take such as mentor, sponsor, coach, advisor, role model, confidant, and ally (Khatchikian et al., 2021, Kim et al., 2021).

Additionally, a key point for training mentors and mentees together within the framework of a mentor universe is to emphasize the importance of collaboration in the mentoring process (Kochan & Trimble, 2000) and that mutual learning takes place (Stockkamp & Godshalk, 2022), making mentoring mutually beneficial for mentor and mentee, a key component of an effective mentoring relationship. Furthermore, it is now acknowledged that training mentors with the best skills and techniques in mentoring is now vital to improve their mentoring competencies and enhance the effectiveness of the mentoring experience (Gandhi & Johnson, 2016), and mentees need to learn how to expand their mentoring network effectively (Marshall et al., 2022). However, often training for mentors and mentees is done separately with different content. In this training it is unique in the the same content is delivered to both mentees and mentors and situates each individual as both a mentee and mentor, as mentoring is needed for career advancement throughout one's entire career. Mentees also need to know what they can expect from a skilled mentor and what skills and competencies they need to develop to be an effective mentee (Hodgson et al., 2022; Lee et al., 2015). The practice of training both mentors and mentees how to effectively create a mentor universe promotes balance, satisfaction and wellbeing for all participants. For mentees, it provides greater self-confidence, an increase in career satisfaction, greater stability in mentoring relationships, and less professional isolation. For mentors, it helps them to avoid burnout. Knowing they don't need to be the only person to provide everything for a mentee prevents them from getting overburdened. They also see an increase in career satisfaction and self-worth (Cameron et al., 2024).

Importantly, the training takes mentors and mentees through the four phases of mentoring:

preparing, negotiating, enabling growth, and coming to closure (Zachary, 2011). At each stage, mentors and mentees alike learn communications skills that build mutual trust as well as establish respect. In the preparation phase, mentors and mentees are encouraged to share a 'story of self' (Light, 2013), describing when they first started to pursue their area of expertise. It's important during this first phase for the mentor and mentee to understand each other's context, and incorporating personal storytelling within this phase enhances a humanistic approach to mentoring that builds on the notion of reciprocity, mutuality, and empathy early in the relationship (Cruz et al., 2020). In the second phase, participants in a mentoring partnership or community are encouraged to collaboratively create a mentoring agreement which includes topics of discussion such as goal setting, alignment of expectations, setting ground rules, confidentiality, and plans for meeting and setting an agenda. It is at this point that mentees should consider their responsibilities as a mentee such as knowing what they are looking for in a mentor and being prepared with an agenda of topics for discussion (Sutter & Francis, 2022). Mentors at this stage should ask various open-ended questions that stimulate higher-level thinking that leads to guided discovery (Pylman & Bell, 2021).

If time and care is taken for the important conversations in the second phase, it builds a foundation for success during the enabling growth phase, a time with the most opportunity for nurturing learning and development but also when it is most vulnerable to obstacles. It is in this third stage that it is critical for mentors to use positive and affirmative language when giving constructive feedback and to make sure to listen, motivate and show respect (Patel et al., 2022); however, it is also vital for mentees to incorporate a growth mindset during these difficult conversations (Mason & Bogaard, 2023). Additionally, mentors should be willing to ask mentees for feedback on the mentoring experience in order to strengthen their own practice (Blake-Beard et al., 2021). Again, it is important to use the mentoring agreement at this stage for accountability and perhaps to realign expectations or adjust strategic goals. Lastly, the fourth phase ends with an evaluation of whether the goals that were established in the early stages of the mentoring partnership or community were met and recognition and celebration of those accomplishments (Zachary, 2011).

### **Methods: Training Description and Evaluation**

The MENTOR Institute housed within the Office of Faculty Affairs offers two levels of mentoring training to all faculty, graduate students, and postdoctoral scholars. The first level of training is completely asynchronous and offered through EDGE Learning, a learning management system for delivering training and professional development activities. It takes participants 60-90 minutes

to complete all 7 modules, dependent upon the time spent on downloading and completing extra activities and answering the reflection questions at the end of each module. To assess the outcomes of the training, there are three Qualtrics surveys: one that participants take before and another after the Level 1 training and the third after the Level 2 training. All surveys assess how the participants will apply their knowledge of mentor universe, mentor agreements, and the concept of humanistic mentoring.

The training was designed using the Universal Design for Learning (UDL) framework (CAST, 2024) and provides learners with purposeful, reflective, and action-oriented learning activities using a variety of modalities. This provided an accessible and meaningful learning experience. Additionally, staff from the Disability Resource Center reviewed the training to ensure the accessibility of all content and activities. In brief, the Level 1 course contains the following content:

- Module 1: What is a 'Mentor Universe' and why it is important, the roles and responsibilities of a mentor, the role and responsibilities of a mentee, and the mutual benefits of mentoring for mentor and mentee.
- Module 2: Ten tips for mentors and mentees, guidelines of professionalism for mentors and mentees, and an introduction to the 4 stages of the mentoring process.
- Module 3: Content for the first stage of the mentoring process- getting started, identifying goals, acknowledging positionality and assumptions, identifying communication style, and developing cultural awareness.
- Module 4: Content for the second stage of the mentoring process- collaboratively creating a mentor agreement, individually creating a strategic plan, and planning for future meetings.
- Module 5: Content for the third stage of the mentoring process- methods for building trust and enabling growth, using positive communication, and strategies for having difficult conversations.
- Module 6: Content for the fourth stage of the mentoring process- areas of reflection and celebration of successes.
- Module 7: Summary, key takeaways, and resources

### Level 1 Training

The Level 1 training is used to prepare mentors and mentees for a variety of mentoring programs across campus, and other participants take the training just because they would like to build their mentoring skills. Additionally, the Office of Research and Partnerships requires everyone who is part of an NSF or NIH grant to take the training as part of the Responsible Conduct of Research (RCR) Program. As of May 15, 2025, 1,126 people have taken the Level 1 Mentoring training at the U of A.

### Level 2 Training

The Level 2 training is offered synchronously to all faculty, graduate students, and postdoctoral scholars through several modalities. Once a month, training is scheduled through EDGE Learning and takes place on Zoom; it is offered university wide. Alternatively, leaders of departments, programs, or other groups can reach out to the Assistant Director, Mentoring Initiatives, and schedule an in-person training session. This highly engaging training takes one hour and focuses on the following three objectives:

- Write a mentoring philosophy that aligns with best practices
- Develop a personal academic story that demonstrates the humanistic side of mentoring
- Practice an initial mentoring meeting that focuses on collaborative communication

After participants complete the training, a Qualtrics survey is emailed to them where they are asked about the quality and potential outcomes of the training. As of May 15, 2025, 356 people have completed the Level 2 Mentoring training.

### Assessment & Results

Participants were asked to evaluate their perceptions of mentoring before and after the training. Out of the data that is assessed here, 1,126 participants took the pre-training survey, and 780 participants took the post-survey for the Level 1 training (a prerequisite to the Level 2 training). No pre-training survey was given to the 361 participants of the Level 2 training; 174 of them took the post-training survey. The data was organized around three core dimensions: Mentoring Agreements, Mentoring Universe, and Humanistic Mentoring.

Results indicated a strong impact on the training content across all five dimensions and highlighted its practical applicability (Figures 1 and 2):

- Mentoring Agreements & Strategic Planning: 78% of respondents who took the Level 1 training agreed that they are now aware of the use of mentoring agreements and individual development plans. Respondents reported feeling equipped to collaboratively create such tools and to use and share strategic plans annually.
- Mentoring Universe & Development: 95% of participants reported increased awareness of a variety of mentoring roles and developmental stages after taking the Level 1 training. Notably, they also agreed that mentoring supports career success (e.g., securing jobs, funding, achieving academic/career milestones, or improving productivity), and believed that applying what they learned in the training would help mentees reach their milestones more quickly than before.
- Humanistic Mentoring: Over 94% of participants endorsed the importance of positive communication, sharing personal

and academic stories after taking the Level 1 training. Almost all participants indicated that applying what they learned would enhance the sense of belonging within academia.

- **Impact of Mentoring:** Over 86% of participants endorsed the importance of positive communication, sharing personal and academic stories after taking the Level 1 training. They indicated that applying what they learned would enhance the sense of belonging within academia.
- **Effectiveness of Training:** Over 95% of participants found the training to be useful, engaging, and indicated they will recommend the training to others (faculty, graduate students, etc.).

These early results suggest that this multi-level training model is effective in fostering a positive, strategic, and humanistic mentoring culture across the university. Future assessments will explore long-term outcomes such as retention, promotion, and mentee success.

### Conclusion

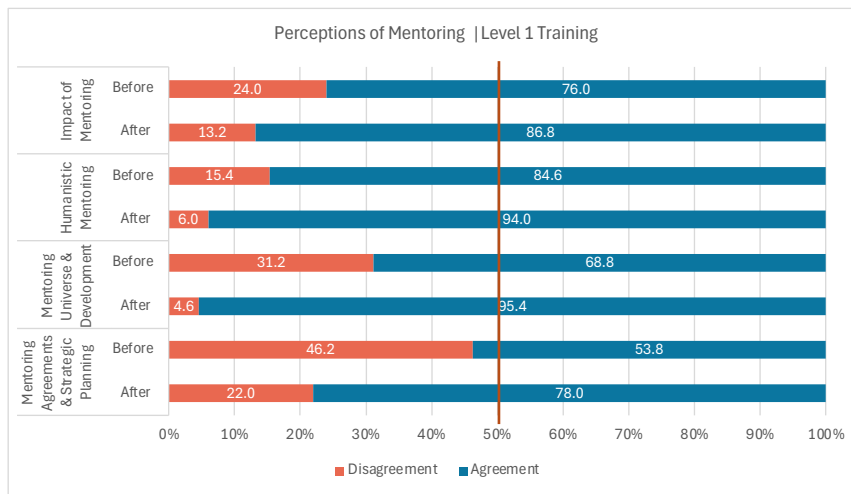
The U of A's multi-level mentoring training program offers a robust, theory-informed structure that has been intentionally designed to practically apply conceptual and practical frameworks for faculty, graduate students, and postdoctoral scholars. The training has an impact on three core elements: the mentoring universe, mentoring agreements, and humanistic mentoring. The training program fosters a mentoring culture that is dynamic, relational, and career focused. Humanistic mentoring, rooted in relational-cultural

theory, centers the whole person and underscores the emotional and social dimensions of mentorship.

Participants use a mentoring universe to help them map and reflect on their networks, identifying gaps and opportunities for growth. Mentoring agreements provide practical scaffolding for clearly communicating expectations and roles within mentoring relationships. By weaving together theory and practice, the program equips participants with concrete tools and reflective strategies that can be immediately implemented in their professional contexts.

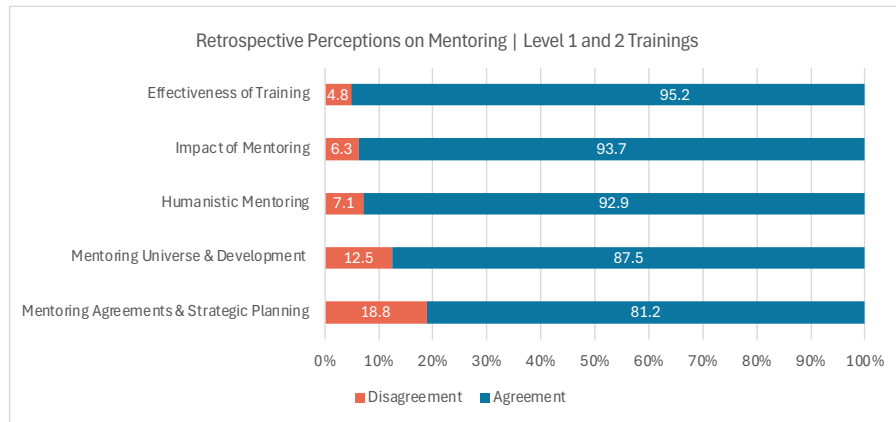
Participant feedback and assessment data affirm the impact and effectiveness of the program. Overall, the implementation of the training resulted in clear shifts in participants' perceptions and approaches to mentoring. The training structure provided a foundation that could be adapted to various institutional and disciplinary settings, while its emphasis on belonging and developmental support aligned with broader goals of connectedness and retention in higher education. The program not only supported mentors in refining their practices but also fostered a deeper awareness of their potential impact on mentees' academic and professional journeys. Through this multidimensional approach, the training contributed to an effective mentoring culture that focuses on the whole person of both the mentor and the mentee. As more institutions seek to support faculty development through intentional mentoring structures, the University of Arizona's model offers a tested and scalable approach for creating positive, sustainable, and transformative mentoring cultures in higher education.

**Figure 1.** Shifts in Mentoring Perceptions: Pre- and Post-Level 1 Training Assessment



**Figure 2.**

*Retrospective Views on Mentoring: Level 1 and 2 Post-Training Surveys*



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## Appendix

### Mentoring Survey Items

**Table 1.**

*Level 1 Mentoring Survey Items (Pre- and Post-Training)*

Domain	Survey Items
Mentoring Agreements & Strategic Planning	<ul style="list-style-type: none"> <li>- I am aware of the use of mentoring agreements or individual development plans with mentees and mentors.</li> <li>- I use mentoring agreements or individual development plans with my mentees and mentors.</li> <li>- I use strategic planning every year.</li> <li>- I share my strategic plans with mentees and mentors.</li> </ul>
Mentoring Universe & Development	<ul style="list-style-type: none"> <li>- I keep track of who I am mentoring and who is mentoring me each year.</li> <li>- I am aware of the variety of different types of mentoring roles.</li> <li>- I am aware of the developmental changes through the stages of mentoring.</li> </ul>
Humanistic Mentoring	<ul style="list-style-type: none"> <li>- I use positive communication in every conversation with my mentees and mentors.</li> <li>- I often share my personal story about how I became an academic.</li> </ul>
Impact of Mentoring	<ul style="list-style-type: none"> <li>- I nominate my mentees/mentors for awards.</li> <li>- I have found mentoring to be helpful for jobs, funding, academic/career milestones, or career productivity.</li> </ul>

**Table 2.**  
*Retrospective Post-Training Survey Items (Level 1 and 2)*

1. Domain	2. Survey Items
Mentoring Agreements & Strategic Planning	<ul style="list-style-type: none"> <li>- How likely are you to start using or creating mentoring agreements in 1to1 partnerships?</li> <li>- How likely are you to start using or creating mentoring agreements within mentoring communities?</li> <li>- How likely are you to develop a strategic 5year plan?</li> <li>- The training gave me the tools to collaboratively create a mentoring agreement.</li> <li>- How confident are you in your ability to create and use a mentoring agreement?</li> </ul>
Mentoring Universe & Development	<ul style="list-style-type: none"> <li>- How likely are you to start building or mapping your mentoring universe?</li> <li>- The training gave me the tools I need to expand my mentoring universe.</li> </ul>
Humanistic Mentoring	<ul style="list-style-type: none"> <li>- The training gave me the tools I need to share my academic story.</li> <li>- The training will help improve my work relationships.</li> <li>- The training will help improve my communication within mentoring partnerships and communities.</li> <li>- Applying what I learned will enhance belonging within academia.</li> <li>- How confident are you in your ability to share your academic story?</li> </ul>
Impact of Mentoring	<ul style="list-style-type: none"> <li>- The strategies in the training will enhance my overall effectiveness in mentoring.</li> <li>- Following the strategies from the training will improve career advancement.</li> <li>- Following the strategies from the training will improve student retention.</li> <li>- Applying what I learned will help mentees reach milestones faster than before the training.</li> <li>- Applying what I learned will help me get more out of my mentoring partnerships.</li> </ul>
Effectiveness of Training	<ul style="list-style-type: none"> <li>- I found the training to be useful.</li> <li>- I found the training to be engaging.</li> <li>- I will recommend the training to others (faculty, graduate students, etc.).</li> </ul>