

Leadership Development

Overview: The Leadership Development Pillar of the India RISE Fellowship focuses on **empowering women in STEMM** with the leadership competencies, confidence, and self-awareness needed to excel in their careers and influence the scientific community. Uniquely tailored to the cultural context of India, this pillar interweaves throughout the fellowship – from dedicated leadership training modules and workshops to continual leadership practice in mentorship and project activities. The approach is both **personalized (strengths-based)** and **purposeful (outcomes-driven)**, enabling fellows to discover their leadership style, overcome barriers, and emerge as resilient leaders and role models. By the end of the program, fellows will have strengthened their leadership capacity (informed by Indian cultural contexts) and developed concrete tools (like an Individual Development Plan and Leadership Action Plan) to guide their future growth as leaders.

Goals and Objectives

The Leadership Development Pillar is designed with several key goals in mind, addressing both personal growth and practical leadership skills:

- **Self-Awareness and Authentic Leadership:** One foundational goal is to help fellows develop a deep understanding of their own strengths, values, and leadership tendencies. Through validated self-assessment tools such as the **Gallup CliftonStrengths (Top 5)** and the **Reflective Best Self exercise**, fellows identify their innate talents and authentic leadership style. The objective is for each fellow to build on her strengths and embrace an authentic leadership approach that feels true to her personality, rather than trying to conform to a one-size-fits-all model of leadership. This self-awareness is crucial in building confidence and a sense of purpose as a leader.
- **Adaptive and Inclusive Leadership Skills:** Fellows learn and practice **inclusive leadership**, ensuring they can lead diverse teams while being mindful of equity and cultural context. They also delve into **adaptive leadership** – the capacity to tackle complex challenges that don't have obvious solutions by mobilizing people and adjusting strategies. A key objective is for fellows to be able to recognize different types of leadership challenges (technical vs. adaptive) and apply the appropriate approach. They also examine power dynamics, communication styles, and how to create inclusive environments that empower

others. By the end, fellows should be equipped to **drive change within their teams and institutions** in a way that is collaborative and inclusive.

- **Resilient and Strategic Leadership:** The program emphasizes building **resilience** – the ability to persevere and lead through setbacks or failures. Fellows learn strategies for maintaining their well-being and managing stress, as leadership roles can be demanding. Moreover, they develop **strategic thinking skills**: how to set a vision, plan for long-term goals, and make decisions amidst uncertainty. This involves scenario planning and learning to align projects with broader institutional or societal goals. The fellowship specifically aims to foster leaders who are **strategic and purpose-driven**, able to balance short-term project management with long-term mission and impact.
- **Communication and Networking as a Leader:** An effective leader in STEMM must also be an effective communicator and networker. Thus, one goal is improving fellows’ **leadership communication skills** – whether it’s public speaking at an event, persuading stakeholders to support a project, or providing constructive feedback to a team member. Fellows practice storytelling with data and speaking about their vision in compelling ways. Additionally, the pillar seeks to expand fellows’ professional networks and teach them how to leverage networking for leadership opportunities. They are encouraged to engage with senior leaders (for example, during guest speaker sessions or site visits) and learn from their experiences, thereby building relationships that could be mentors or collaborators in the future.
- **Leadership Identity and Confidence:** At its core, the leadership pillar’s goal is to ensure that each fellow sees herself as a **leader** and has the confidence to step into leadership roles. This involves addressing internal and external barriers that women in STEMM often face in India – such as imposter syndrome, societal expectations, or biases in the workplace. Through discussions, coaching, and role models (like panels of successful Indian women scientists), fellows confront these issues and develop a personal leadership identity. The program wants every fellow to finish the fellowship believing in her capacity to **lead and mentor the next generation**, effectively becoming an agent of change in her community.

In summary, the objectives range from the internal (self-confidence, clarity of personal values) to the external (skills to manage teams, influence without formal authority, and build networks). Combined, these goals prepare the fellows to not only advance in their own careers but also to uplift others and advocate for improvements in the research environment.

Structure and Implementation

Leadership development in the India RISE Fellowship is not confined to a single module; it is **integrated throughout the program** with both standalone components and woven-in experiences. The structure includes:

- **Dedicated Leadership Module:** The fellowship curriculum features a core **Leadership Development module** that runs in parallel to the research training modules. This module contains structured content on leadership theories and practices, tailored for early-career researchers. Fellows engage with online lectures and readings on topics such as principles of leadership, gender and leadership, case studies of leadership in STEMM, and cross-cultural aspects of leadership. They also complete exercises like a personal SWOT analysis (assessing their strengths, weaknesses, opportunities, threats in a leadership context) and create a vision statement for their leadership journey.
- **Leadership Workshops (Live):** Several live virtual workshops and discussions are scheduled focusing on leadership skills. For example:
 - *Adaptive Leadership Workshop:* Early in the program, fellows participate in an interactive workshop on adaptive leadership challenges. They might analyze a case study of a complex problem in a research lab and discuss how to mobilize a team to address it. Role-playing exercises help them practice diagnosing the problem and intervening appropriately.
 - *Inclusive Leadership and Unconscious Bias:* This session helps fellows learn how to build inclusive environments in their teams. They explore concepts of bias and privilege, perhaps through facilitated dialogue or reviewing research on diversity in STEMM. Fellows reflect on how to ensure all voices are heard in a team setting.
 - *Resilient Leadership Seminar:* A session, possibly with a psychologist or experienced leader, on developing resilience – covering stress management techniques, growth mindset, and stories of overcoming failure. Fellows might share their own challenges and crowdsource strategies from each other under guidance.
 - *Strategic Career Leadership:* Midway through, a workshop might focus on strategic career planning – how to set career goals that align with one's values, how to seek leadership opportunities (like committee roles, conference organizing, etc.), and how to negotiate for leadership roles. This can include practical skill-building like negotiation role-plays or writing a personal leadership development plan.

- **Self-Assessments and Coaching:** Early in the fellowship, each fellow completes the **CliftonStrengths assessment** to identify her top 5 strengths. The results are discussed in a group session where a certified coach or the program mentor helps fellows interpret their strengths and consider how to leverage them in research and leadership. Another self-assessment could be a leadership style inventory or a 360-feedback exercise (if feasible, fellows might gather feedback from colleagues on their leadership tendencies). With these insights, fellows have one-on-one coaching sessions with their Program Mentor or a leadership coach to set personal development goals. This forms the basis of their **Personal Leadership Action Plan** – a document each fellow creates outlining specific skills to develop or experiences to seek during the fellowship to grow as a leader.
- **Leadership in Practice via Fellowship Activities:** What makes the leadership training truly effective is the immediate practice embedded in fellowship activities:
 - **Mentorship Roles:** Fellows practice leadership in their small mentorship groups by taking turns facilitating discussions or by mentoring their peers in areas of their expertise. For instance, if a fellow is strong in a particular research method, she might lead a mini-session to help her peers (thus acting as a mentor/leader within the cohort). The program fosters a culture where fellows actively support each other, essentially creating peer leadership opportunities.
 - **Capstone Project Leadership:** Each fellow is effectively the “project leader” for her Capstone research. She must exercise leadership skills such as time management, delegation (if working with any assistants or students), stakeholder communication (perhaps dealing with participants or institutional approvals), and initiative to drive the project. Mentors encourage fellows to treat the Capstone as a simulation of leading a research group – making decisions and owning outcomes (with guidance as needed). This experiential aspect means that by doing their research, they are concurrently practicing leadership.
 - **Team Projects and Group Tasks:** In some modules, fellows might work in teams to complete an assignment or solve a problem, giving them a chance to assume different roles (team leader, coordinator, etc.). These low-stakes environments are perfect for experimenting with leadership techniques learned in workshops.
 - **In-Person Leadership Immersion:** The fellowship includes two **immersive in-person convenings** in India (e.g., at the start and end of the program). During these events, specific leadership development

activities are held: networking events with industry leaders, panels featuring successful women STEMM leaders in India, and site visits to companies or labs that emphasize leadership and innovation. For example, fellows might visit a leading tech company or research institute to meet women in leadership there, providing real-world inspiration and advice. They might also engage in team-building exercises or hackathon-style challenges during the convening to exercise teamwork and leadership under time pressure.

- **Peer Coaching Circles:** The program may implement peer-led leadership discussion circles. Fellows can be grouped (perhaps by region or interest) to meet virtually and discuss their leadership growth, challenges at work, and to hold each other accountable to their Leadership Action Plans. These circles, while informal, encourage reflection and mutual coaching. Program Mentors or fellows from earlier cohorts might occasionally join these sessions as facilitators. This adds a layer of support and shared learning, reinforcing that leadership development is a continuous, collective process.
- **Integration with IDP:** The **Individual Development Plan (IDP)** that each fellow maintains includes specific sections on leadership goals. Fellows revisit their IDP periodically (for instance, every quarter) to update progress on leadership competencies – such as improving public speaking or taking on a new responsibility at work as a leadership experiment. Program Mentors review these updates in their one-on-ones and advise on next steps. This structured reflection ensures that leadership development is not forgotten amid busy research schedules; it stays front and center as a personal priority for each fellow.

This multi-faceted structure ensures that leadership development is not theoretical. Fellows learn concepts, see examples, reflect on themselves, **and then put it into practice continually**. By embedding leadership tasks into the fabric of the fellowship (rather than isolating them), the program helps fellows incrementally build habits and confidence. The culturally contextual aspect is maintained by featuring Indian examples and mentors: the panels of Indian women leaders, discussions about challenges specific to Indian academia (like hierarchical structures or gender norms), and celebrating leadership models from India's rich history in science and beyond.

Key Activities and Components

Some of the standout activities and components in the Leadership Development Pillar include:

- Gallup CliftonStrengths Assessment:** Each fellow takes this well-known strengths assessment, yielding a personalized report of her top 5 talent themes (e.g., Analytical, Learner, Communication, etc.). The program dedicates a session to interpreting these results. Fellows map how each strength can help them in research and leadership. For example, a fellow with “Communication” as a strength might realize she can excel at presenting her science and leading discussions, whereas someone with “Empathy” might focus on team morale and mentorship. This activity sets a positive tone by focusing on what fellows naturally do well and how to harness those strengths.
- Reflective Best Self Exercise:** Fellows solicit brief feedback from people who know them (colleagues, friends, mentors) asking for examples of when they were at their “best”. They then compile these to identify patterns in how they positively impact others. This exercise, often eye-opening, is debriefed in a group. It helps fellows articulate their leadership contributions and unique style. It’s particularly powerful in boosting confidence and combating self-doubt – seeing concrete evidence of one’s past leadership impact.
- Leadership Action Plan:** Early on, each fellow drafts a Leadership Action Plan (sometimes considered part of the IDP, or a separate document). In it, they list 2–3 specific leadership competencies to develop (e.g., “Improve my public speaking and presentation skills” or “Learn to delegate tasks effectively”) and outline how they will pursue that (through fellowship activities or outside opportunities). They might include attending a Toastmasters club for public speaking or volunteering to lead a committee at work. The plan also includes long-term goals, like where they see themselves in 5 years in terms of leadership roles. This plan is a living document, revisited mid-fellowship and at the end to mark progress and next steps.
- Adaptive Leadership Case Challenge:** In one of the workshops, fellows are given a scenario that mirrors a common leadership challenge in research – for example, leading a project team where two senior colleagues disagree, or trying to introduce an organizational change in a traditional institution. In small groups, fellows analyze the case using adaptive leadership principles (distinguishing the technical vs. adaptive elements, identifying stakeholders’ values, etc.) and propose a leadership approach. They then compare their approaches and get feedback from the facilitator. This kind of exercise grounds theoretical concepts in concrete action and enhances problem-solving and critical thinking.
- Women in STEMM Leadership Panel:** As part of culturally contextual leadership development, the fellowship organizes a panel or series of talks by **successful Indian women scientists and leaders**. These could include institute directors, department heads, entrepreneurs in biotech, or policymakers

in science. Fellows have the chance to hear these role models discuss their career paths, challenges overcome (such as bias or work-life balance issues), and leadership philosophies. A Q&A session allows fellows to seek advice. Seeing relatable role models is key to expanding fellows' aspirations and providing practical insights. It reinforces the message "if they can do it, so can you" and often leads to informal mentoring connections.

- **Networking and Strategic Communication Activities:** To build networking skills, one convening might include a "Networking Mixer" where fellows practice making introductions and conversing with invited guests from industry and academia. They might have "networking bingo" tasks (like find someone who has a PhD in physics, etc.) to encourage circulating and breaking the ice. For strategic communication, an activity might be a "Two-Minute Elevator Pitch" – fellows prepare a two-minute introduction of themselves and their work aimed at a non-specialist audience (say, a potential funder or an unrelated executive). They deliver these pitches to each other or to visiting guests and get feedback on clarity and impact. This trains them to articulate their value and ambitions succinctly – a critical leadership skill.
- **Peer Leadership Project:** An optional component could be a small group project where fellows collaborate to address a real-world problem (not necessarily research-related) such as developing a policy recommendation for promoting women in STEMM in India. They must self-organize, assign roles, and produce an output. This tests their team leadership and collaboration skills. It's essentially a microcosm of leading a committee or working group. The journey often reveals group dynamics and offers lessons which mentors debrief with them.
- **Continuous Reflection and Journaling:** Fellows are encouraged to keep a **leadership journal** throughout the fellowship. They might write short entries after significant events (e.g., "Today I led a meeting in my lab and tried the active listening technique we learned – here's what happened"). The act of reflection helps internalize lessons and track personal growth over time. Some prompts are provided by the program to guide reflection, especially after workshops or challenges. At the end, these reflections help fellows see how far they've come and prepare a narrative of their leadership growth which is useful for interviews and self-assessment.

These activities ensure that leadership development is **experiential and continuous**. Rather than a single class on leadership, the fellows are living leadership throughout the year. The variety—from assessments to panels to hands-on practice—addresses

different learning styles and aspects of leadership, providing a 360-degree development experience.

Expected Outcomes and Impact

By the end of the fellowship, the Leadership Development Pillar produces several outcomes for the fellows:

- Strengthened Leadership Capacity:** Fellows will have **strengthened their leadership capacity within the context of Indian STEMM environments**. This means they are more prepared to take on leadership roles such as leading a research project team, heading a lab or department in the future, or starting initiatives (like a new program for mentoring students). They have a toolkit of leadership approaches (adaptive, inclusive, strategic) and the judgment to know when to use them. Practically, many fellows find themselves already stepping up in their workplaces – for instance, volunteering to lead a committee or being entrusted with new responsibilities – as a result of their increased confidence and skills during the fellowship.
- Increased Confidence and Resilience:** A core outcome is the **boost in confidence**. Fellows often report that the imposter syndrome or hesitation they felt at the beginning has diminished. They have more self-efficacy – believing that they can handle leadership tasks and deserve to be in leadership positions. Additionally, through learning resilience techniques and seeing their own growth, they become more resilient leaders. They can navigate setbacks (like a paper rejection or an experiment failure) with a constructive attitude and persevere, setting a tone for others as well. This composure under pressure is a hallmark of their development.
- Tangible Leadership Artifacts:** Fellows leave with concrete artifacts of their leadership growth, including their **Leadership Action Plan** (updated with progress and post-fellowship goals) and a refined CV or personal statement that highlights their leadership experiences during the fellowship. They also might have produced leadership-oriented deliverables in the program, such as a brief policy recommendation, a team project report, or even a blog post about women in STEMM leadership that some cohorts choose to publish. These artifacts are useful as they apply for jobs, grants, or promotions – clearly demonstrating their leadership competency to selection committees or employers.
- Expanded Professional Network and Visibility:** Through the networking and panel events, fellows significantly expand their professional network. They establish connections with senior professionals and peers across institutions. A

number of fellows might find mentors or sponsors among the leaders they interacted with. Also, by presenting themselves confidently at events (like the Capstone Symposium or other gatherings), they gain visibility. Some fellows may be invited post-fellowship to speak at events or join collaborative projects, directly because they became more visible leaders. This network and recognition can accelerate their career advancement.

- **Contribution to Institutional Change:** Equipped with new perspectives and confidence, many fellows become advocates for positive change in their own environments. For example, a fellow might start a **journal club or brown-bag series** at her institute to share knowledge (demonstrating initiative), or push for policies like starting a women-in-science forum or improved maternity leave policies. The fellowship's emphasis on inclusive leadership often ignites a passion in fellows to make science more inclusive and supportive for others. Therefore, one outcome is a cadre of women who are not only advancing themselves but are actively working to improve the system for those who follow – truly becoming the role models and change agents the program hoped to create.
- **Future Mentorship and “Paying It Forward”:** Tightly linked with mentorship, the leadership training reinforces the expectation that fellows will **mentor and lead the next generation**. Fellows often leave with a commitment to mentor younger women in STEMM, essentially continuing the cycle. The outcome is that each fellow is primed to be a multiplier of the program's impact. The program instills a sense of responsibility – fellows often say, “I gained so much from this mentorship and leadership training, now I want to give back by mentoring others.” In practical terms, some former fellows may formally mentor future cohorts or establish mentorship initiatives in their workplaces, extending the program's leadership and mentorship ethos.

Measuring these outcomes, the program may collect self-assessments or 360-feedback at the end. Many fellows show marked improvement in leadership self-ratings and receive feedback from colleagues that they have become more assertive, organized, and inspiring. The fellowship may also track long-term indicators such as promotions or leadership positions attained by former fellows in the years after completing the program. These successes underscore the effectiveness of the leadership pillar.

Role in the Overall Fellowship Experience

The Leadership Development Pillar plays a pivotal role in making the India RISE Fellowship a **holistic empowerment experience** rather than just a technical training program. It ensures that the scientific skills the fellows gain are matched by the soft skills and confidence to use those skills in leadership roles. In the tapestry of the fellowship, leadership development is the thread that turns researchers into **influencers and change-makers**.

By being strategically woven through all aspects of the program, leadership training elevates everyday activities: group discussions become exercises in communication and influence; the Capstone project becomes a playground for demonstrating initiative; mentorship sessions double as leadership coaching chats. This integration means fellows are constantly toggling between the role of learner and leader, gradually merging the two.

One can observe that during the fellowship, as months pass, fellows start taking more ownership – they volunteer first for tasks, they organize study groups, they speak up more in sessions. This organic growth is evidence of the leadership pillar at work in concert with the others. The mentorship pillar in particular amplifies leadership development: mentors provide a **safe space to explore leadership identity** and give personalized feedback on the fellow's leadership approach. For instance, if a fellow is struggling to be assertive, her mentor and mentorship group can workshop that challenge with her, something a traditional course wouldn't offer.

Leadership development also helps ensure the sustainability of the program's impact. While research skills might risk atrophying or becoming outdated over time, leadership skills and the mindset instilled tend to grow with practice. A researcher five years after completing the India RISE Fellowship might no longer use the exact statistical method she learned during the program, but she may continue to draw on its leadership lessons through mentoring students, leading projects, and advocating for resources. In that sense, the leadership pillar future-proofs the fellows' success. It prepares them to continually adapt, learn, and guide others, which is essential in the ever-evolving landscape of science.

Culturally, focusing on leadership development for women is a powerful statement in the Indian context. The fellowship acknowledges and addresses the systemic barriers that have kept many women from leadership positions in STEM. By explicitly training and encouraging fellows to surmount these barriers, the program contributes to **shifting the culture** within institutions. Fellows often become the first or few women

leaders in their departments; their presence and style (often more collaborative and empathetic, as research shows) gradually influence organizational norms.

In conclusion, the Leadership Development Pillar ensures that India RISE fellows do not only return to their labs armed with knowledge, but also with the **vision, courage, and skills to lead**. It complements the other pillars by rounding out the fellows' capabilities – they become, as the fellowship envisaged, “*confident researchers, resilient leaders, and future mentors*.” The overall fellowship experience is thus transformative at multiple levels: intellectual, professional, and personal. The leadership pillar is the catalyst for the personal transformation and for translating the fellowship's benefits into long-term career advancement and community impact. In the broadest sense, this pillar helps fulfill the fellowship's ultimate goal of **empowering a new generation of women leaders in science**, who will drive innovation and mentor others, thereby sustaining a virtuous cycle of growth in India's STEM fields.