HealthPartners® Institute

2022 LIME (LEADERSHIP IN MEDICAL EDUCATION) KICK-OFF

PARTICIPANT GUIDE

April 29, 2022

# 2022 LIME (Leadership in Medical Education) Kick-Off Session

Friday, April 29, 2022

Agenda:

Time	Topic
12:00 pm – 12:30 pm	Welcome and lunch
12:30 pm – 12:45 pm	**Culture - Introduction** Nima Desai, MD and Felix Ankel, MD
12:45 pm – 1:45 pm	**Culture – Group Discussion** All
1:45 pm – 2:00 pm	**Leadership - Introduction** Jen Augustson and Felix Ankel, MD
2:00 pm – 3:00 pm	**Leadership – Group Discussion** All
3:00 pm – 3:15 pm	Break
3:15 pm – 3:30 pm	**Management - Introduction** Jen Augustson and Felix Ankel, MD
3:30 pm – 4:30 pm	**Management – Group Discussion** All
4:30 pm – 5:00 pm	Wrap up and next steps

Meeting Location Details:

HealthPartners Neuroscience Center
NSC Conference Center A & B
295 Phalen Blvd, St. Paul 55130
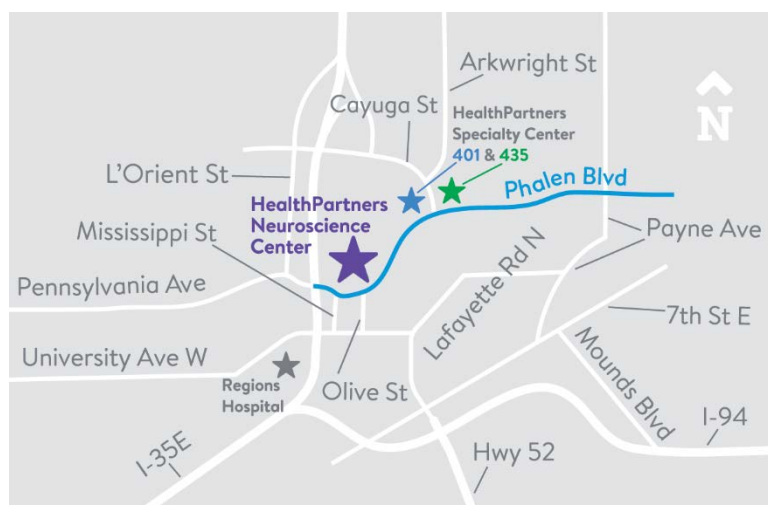
CULTURE

1. **What do you see as indicators of your program culture (e.g., language, artifacts, celebrations)?**

2. **What are elements in your current program culture that you appreciate?**

3. **Elements you want to shift?**

4. **Elements you want to stop?**

5. **Who are other resources you have that you can leverage to establish or continue building your team's culture?**

"And from their differences came understanding." ~Unknown

LEADERSHIP: TOWARD A SHARED VISION

1. **How do you currently see your educational program?**

2. **How would you like to see your educational program in five years?**

3. **Who are the people most important to your educational program?**

4. **How do they see your educational program?**

5. **How would you like them to see your educational program?**

6. **What role will you play in creating a shared vision?**

7. **What resources can you leverage to create a shared vision?**

"In order to serve its purpose, a vision has to be a shared vision." ~Warren Bennis

MANAGEMENT

1. **Reflect on a time you felt micromanaged.**

2. **Reflect on a time you have felt professionally supported.**

3. **When do you involve others in decision-making (early, late…)?**

4. **How do you hold others accountable?**

5. **How do you support others?**

6. **What are elements of your management style you appreciate?**

7. **What are elements you want to shift?**

8. **What are elements you want to stop?**

9. **What are resources that you can leverage to "multiply" (lift up and develop) others?**

RESOURCES

- **Sayra Cristancho & Lara Varpio (2016) Twelve tips for early career medical educators,** *Medical Teacher*, **38:4, 358-363. doi: 10.3109/0142159X.2015.1062084**

- **David Krackhardt & Jeffrey Hanson (1993) Informal Networks: The Company,** *Harvard Business Review*, **Jul-Aug 1993, 105-111.**

- **Deborah Simpson, Karen Marcdante, Kevin H Souza, Andy Anderson, Erick Homboe (2018) Job Roles of the 2025 Medical Educator,** *J Grad Med Educ*, **10(3):243-246. doi: 10.4300/JGME-D-18-00253.1**

- **Eric Shappell, Nahzinine Shakeri, Abra Fant, Jeremy Branzetti, Michael Gisondi, Christine Babcock, James Ahn (2018) Branding and Recruitment: A Primer for Residency Program Leadership,** *J Grad Med Educ*, **10(3):249-252. doi: 10.4300/JGME-D-17-00602.1**

Twelve tips for early career medical educators

Sayra Cristancho & Lara Varpio

MEDICAL TEACHER

Twelve tips for early career medical educators

SAYRA CRISTANCHO[1] & LARA VARPIO[2]

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Abstract

The first 10 years of career development pose unique challenges for MD- and PhD-trained faculty members working in medical education. These may include publishing peer-reviewed articles, winning grant funding, teaching, maintaining a clinical practice, and supporting professional communities both within and external to their institution. As the inaugural and current leaders of the ECME group in Canada, we have actively sought to better understand the challenges ECME faculty members face. We developed this understanding by surveying and tracking the qualitative reports of our ECME members, reviewing the (limited) literature available on ECME faculty members' experiences, and learning from our own experiences as ECME faculty and the advice shared by our own mentors. In this paper, we consolidate this knowledge into 12 tips for ECME faculty members. We suggest these tips will benefit both MD- and PhD-trained ECME faculty members as they strive for professional success.

Introduction

The first 10 years of career development pose unique challenges for MD- and PhD-trained faculty members working in medical education. These early career medical educators (ECME) must fulfill multiple professional expectations for promotion. These may include publishing peer-reviewed articles, winning grant funding, teaching, maintaining a clinical practice, and supporting professional communities both within and external to their institution. As this list suggests, conducting rigorous, and/or trustworthy scholarship is often a necessary condition for enabling success, but it is not sufficient.

As the inaugural (Varpio) and current (Cristancho) leaders of the ECME group in Canada, we have actively sought to better understand the challenges ECME faculty members face. We developed this understanding by surveying and tracking the qualitative reports of our ECME members, reviewing the literature available on ECME faculty members' experiences, and learning from our own experiences as ECME faculty. We have further nuanced this understanding by organizing and participating in the ECME-focused mentoring and networking events (held annually from 2010 to present) at the Canadian Conference for Medical Education, and by learning from the advice shared by our own mentors. In this paper, we consolidate this knowledge into 12 tips for ECME faculty members. We suggest these tips will benefit both MD- and PhD-trained ECME faculty members as they strive for professional success.

Tip 1

Articulate your area(s) of interest

> Stay committed to your decisions, but stay flexible in your approach.
>
> – Tony Robbins

Whether interested in the scholarship of discovery, integration, application, or teaching (Boyer 1997), a profitable way to launch a career in medical education is to answer an important, fundamental question: "What career do I want to have?" Medical education offers faculty many career directions and opportunities. Chief among these are careers focused on research, teaching, or administration. Thus, answers to the aforementioned question could include developing a career as

- A researcher working within a particular area of inquiry (e.g., clinical reasoning, trainee assessment, interprofessional collaboration, activity theory, etc.)
- A course or clerkship director with a specific scholarly focus (e.g., simulation, TBL, flipped classrooms, etc.)
- A leader (e.g., centre or program director, department chair, dean, etc.)

Deciding what career to strive for is an as-of-this-moment description. It is not a constraint; instead, it is a focusing lens. By knowing the answer to this question, ECME faculty can examine each opportunity that presents itself to determine if it helps to fulfill the larger career goal.

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These decisions must be carefully considered. Every institution has needs that must be met – courses need to be taught, accreditation must be maintained, and administrative responsibilities need to be fulfilled. ECME faculty members must do their part in meeting these requirements. However, when offered any such opportunity, the challenge is to find a way to achieve a win–win situation. More often than not, there is room for negotiating *how many* of the institution's needs you will meet and/or *how* you will be meeting them. Can a teaching load also provide a context for research? Can committee work double as an intentional start to leadership skill development? Think of how meeting the institution's needs can simultaneously, and intentionally, support your career development.

All too often the careers of ECME faculty get derailed because the faculty member takes on too many disparate responsibilities. Taking the time to explicitly describe your own career interests is a way to start a career with the end in mind. We suggest revising the question (i.e. "What career do I want to have?") at regular intervals. Over the course of your career, your interests will evolve, taking you in different directions. The goal is to always be clear of your overarching objective, and to let that be the guiding principle that informs your professional choices and strategies.

Tip 2

Define what is success for **you**

> Build your own dreams, or someone will hire you to build theirs.
> – Farrah Gray

Some markers of professional success are usually pre-defined for ECME faculty members. These may include dissemination of research findings via peer-reviewed publications and conference presentations, sustaining a clinical practice, and engaging in teaching activities. These are examples of the expectations of the professional realm – of just *one* dimension of the faculty member's reality. To be successful, ECME scholars need to balance professional *and* personal demands. Achieving the elusive balance between career expectations and personal satisfaction is difficult, as evidenced by the wealth of self-help books dedicated to the subject. Building a path to professional and personal satisfaction might start by explicitly defining success: What aspects of my career make me feel absorbed, productive and happy? What elements of my personal life contribute to my joy and contentment? Answering these questions can help the ECME faculty member articulate their professional and personal values. Knowing which career paths you find engaging and how those relate to your personal values is very important for making early career decisions (Xanthopoulou et al. 2009).

Recent research suggests that personal flexibility is one of the advantages of careers in medical education (Hu et al, 2014). But each institution will have its own limits to that flexibility. Depending on the institution, it may be possible for ECME faculty members to successfully negotiate work-life balance into their career paths. For instance, is it possible to

negotiate an extended maternity/parental leave if you and a colleague work out a teaching load swap for a term? Can your conference presentations be limited to local level events when your children are infants? We recognize that such compromises are not always feasible; however, we have found that leaders in our community are often open to creative problem solving. By engaging in these types of conversations, you can strive to have your faculty position structured in a way that supports you in achieving your professional *and* personal goals (Castiglioni et al. 2012).

Tip 3

Create your 5-year strategic plan

> People with clear, written goals accomplish far more in a shorter period of time than people without them could ever imagine.
> – Brian Tracy

Having a defined interest and set of success criteria in mind is a valuable starting point, but abstract ideas need concrete action plans to be achieved. Figuring out *how* to achieve your goals can be a daunting exercise for ECME faculty members. We suggest using the SMART approach for writing goals to map out a 5-year plan (Doran et al. 1981). Here is a simple strategy that has worked for us

- With the work from Tips 1 and 2 in hand, write down a long-term vision of your career (this is the time for big dreams).
- Divide that long-term vision into five main goals.
- Treat each goal as project, and establish milestones and timelines to complete that project.
- Stay realistic by revising the plan every 4–6 months.

For example, if your long-term goal is to be a leader (say as a program director), build a plan to "walk the ladder." Taking on lower-level positions can help you learn the roles and responsibilities of being a program director (from a ground floor view), give you insight into the institutional culture, and provide you with local credibility to earn the director position. This incremental approach can be easily (and feasibly) developed into a series of SMART goals, across a 5-year timeline.

We also suggest that you consider building and staying true to a time management style and/or technique. For example, you may consider reserving certain days for meetings and other days for your own work or skill development (e.g., days set aside for writing, or preparing for teaching, etc.).

Tip 4

Develop strong communication skills

> The single biggest problem in communication is the illusion that it has taken place.
> – George Bernard Shaw

Whether in writing (e.g., grant submission) or orally (e.g., leading a TBL session), effective communication is essential to

the success of any faculty member. In medical education, ECME faculty members will constantly address different audiences: researchers, educators, learners, and administrators. Therefore the ability to *craft* a message to effectively reach and spark the interest of audiences is vital.

We suggest that ECME faculty members participate in the courses and workshops on academic writing and presenting that are offered through professional organizations, faculty development offices, and at conferences (Lingard & Driessen 2015). Further, there are many useful texts that can demystify effective communication (Sword 2012; Gallo 2014; Lingard 2015). Some of our most reliable strategies include

- Set aside dedicated writing days (i.e., no meetings, no calls – just you and the keyboard).
- Practice your presentations. Presenting to a local audience is a good way to work out the problems in a talk before you deliver to national or international audiences (e.g., Is the talk too long? Are your slides difficult to read?).
- Build a peer writing circle. Circulating manuscripts amongst peers for feedback is an excellent way to find weaknesses in your submissions *before* reviewers do.

Tip 5

Cultivate relationships with mentors

> Colleagues are a wonderful thing – but mentors, that's where the real work gets done.
>
> – Junot Diaz

In your career, you will want to have many different mentors. Having more than one mentor can be a real asset because not all mentors have experience in all the areas where you will be seeking advice, and not all mentors will be available when you need that advice. Cultivating relationships with multiple mentors provides a breadth of experiences and viewpoints to draw on. Each mentoring relationship is unique, and will give rise to different kinds of conversations and learning opportunities. In our experiences, our mentors have provided opportunities for discussing

- Ideas (e.g., a course, or a research project)
- Career development (e.g., which committees to be involved in, and which conferences to attend)
- Political and cultural navigation strategies (e.g., learning the culture of your institution, and how to negotiate collaborative relationships)
- More personal matters (e.g. balancing work and family responsibilities, dealing with difficult colleagues)

Keep in mind that while some mentors can advise on many different topics, some others may not feel comfortable beyond work-related topics. To decide who would be a "good fit", consider finding mentors who have achieved goals you aspire to achieve – be that winning a particular grant, having an impressive publication record, or finding a good balance between work and private life (Castiglioni et al. 2012). Being attentive and respectful of your mentors' styles is a marker of a good mentee (see Tip 6).

There are different kinds of mentoring relationships: formal and informal (Trower 2010; Shollen et al. 2014). Formal mentoring usually involves the institution providing a structure for mentees to be matched with mentors. Informal mentoring is a more "organic" evolution of a mentoring relationship, where the mentee and the mentor find each other without the involvement of an external organization. Some research suggests that informal mentoring is more important and more effective for early career faculty than formal mentoring because it stays away from "being assigned" and moves instead towards finding a "good fit" (Trower 2010). It is important to remember that agreeing to be someone's mentor is a personal choice involving a commitment of time and energy for both the mentor and the mentee. Neither party should enter the relationship lightly. In other words, you should have explicit conversations about expectations to ensure a successful mentor–mentee relationship.

Tip 6

Be a good mentee

> If you cannot see where you are going, ask someone who has been there before.
>
> – J. Loren Norris

Just as there is etiquette for classroom behaviour and for research collaborations, there is etiquette to being a good mentee. Your mentors are giving up time to be with you so it is important to come to the meetings on time and prepared. Preparation means spending time before the meeting thinking of the specific items you'd like to discuss at your meeting. These items can be specific questions or more general problems you would like to have their advice on. Prepared also means coming to discuss the progress you've made to date on the issues you discussed previously.

But this preparation must be balanced with a respect for openness and spontaneity. Let the mentor know your goals, your weaknesses and strengths, your ideas, and your fears. You want to provide the mentor with enough context to be able to put your situation and questions into perspective. Your mentors will also have ideas and concerns that they want to share with you that are not part of your agenda. Come ready with a discussion plan, but also be ready for the mentors to direct the conversation towards other topics. Remember you came to them to hear their perspective – give them the space to show you that perspective and to show you things you may not be aware of. This is the time for candor – and candor also demands trust and confidentiality.

Mentoring relationships are some of the most important relationships you will develop in your career. You are responsible for staying in touch with your mentors and for cultivating and managing the relationship (Zerzan et al. 2009). And as it has been said time and time again, good relationships take work. You should not rush the relationship but you also do not want to be overly cautious or nervous. This means: do not focus on the outcomes (i.e., on what you want to get out of the relationship), focus on developing a strong, trusting relationship with the mentor. The rest will come.

Tip 7

Build a network of peers

> I get by with a little help from my friends.
> – The Beatles

One challenge that ECME faculty members face is building collaborations and supportive communities with their peers (Helms 2010). We suggest that this is a problem the ECME faculty member should address head on. The value of a community of peers cannot be overstated. Overcoming feelings of isolation, discussing challenges, and finding collaborators: all of this and more can come from participating in a community of peers. Community is something that can be conceived of beyond the local "you work in my Department too" attitude. Electronic communications have made it possible for a network of peers to extend across a country and across national boarders.

People use different strategies to build their networks of peers. Some ECME faculty members are comfortable managing large networks; others prefer to start small. Regardless of the size of your circle of peers, the guiding principle should be to build a network of peers you trust. How big that network becomes is a personal choice.

We would encourage ECME scholars to think of peers as those with different training backgrounds (e.g., MD or PhD). Medical education thrives as a diverse community where clinicians and scientists form productive collaborations (Van der Vleuten 2014). Having the perspectives from peers belonging to these different backgrounds helps to situate an educational problem in both the theoretical and practical realms.

Tip 8

Craft multiple **elevator pitches**

> There are always three speeches, for every one you actually gave. The one you practiced, the one you gave, and the one you wish you gave.
> – Dale Carnegie

A good elevator pitch provides a clear idea of your interests and current activities in approximately one to two minutes. Crafting a good elevator pitch is difficult. It is a commonly held belief that an ECME faculty member must have one good elevator pitch. But, we suggest you need more than one pitch. This is an issue of knowing your audience. Different audiences have different interests. That means that your elevator pitch must be framed in a way that makes what you are saying *of interest to the listener*. We suggest crafting and practicing (yes – a mentor or a peer could help you with this) one pitch for each of the following audiences:

- Your boss (i.e., how your work is of interest to your institution)
- Your potential mentors and peers (i.e., how your work is of interest to research or educational communities)
- Your family and friends (i.e., how your work contributes to society)

Tip 9

Be a team player

> The way a team plays as a whole determines its success. You may have the greatest bunch of individual stars in the world, but if they don't play together, the club won't be worth a dime.
> – Babe Ruth

Even before an ECME faculty member takes on a faculty positions (i.e., during the hiring interview), he/she is being judged on his/her ability to be good team players. The complexity of today's work environments demands that leaders select employees by their strength in many areas, including what has been called "soft" skills: active listening, buying into the institutional vision and mission, supporting the growth of others, etc. (Klaus & Rohman 2007). Consider the following tips to enhance your team playing strategies:

- Take the time to get to know the people you work with. This includes being an active listener and having sincere interest in learning about them and their work.
- Be an open door person – literally *leave the door open*.
- Don't say "no" or "yes" as a first reaction answer. Spend some time considering the issue and reflecting on the reasons for saying yes or no. Remember, it might be possible to turn something that is a burden for someone else, into a win-win situation for you (see Tip 1). And an additional benefit could be garnering some good will from a colleague.
- Exercise small-l leadership – strive for bringing people together to get things done (Bohmer 2010).

Tip 10

Build resilience as your armor

> The greatest glory in living lies not in never falling, but in rising every time we fall.
> – Nelson Mandela

Being an ECME faculty member is *not* easy. Success demands that you adapt to the constantly changing circumstances of the context – hospital administration or deanery changes, different student groups, new accreditation standards, etc. In other words, to be successful as an ECME faculty member requires resilience – the ability to recover readily from adversity or challenging situations.

As future researchers, educators, or academic leaders in medical education, we will have articles, book manuscripts, and grant proposals turned down; courses that are poorly received; talks for which audiences give you the cold shoulder. These experiences are personally and professionally difficult – and, yes, we have both experienced each of these rejections. This is when your network of mentors and peers is essential. Mentors can help you understand what went wrong so that you can improve your performance next time. Peers can help ease the sting of rejection so that you want to try again, enabling there to *be* a next time.

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If we carefully observe the career trajectory of our more senior colleagues, we learn that these people possess the *skill* of being able to persist in the face of obstacles. Be attuned to how you react to challenges. If your tendency is to give up or become embittered, book a meeting with your mentor (DeCastro et al. 2013) and a phone call to a peer.

Tip 11

Understand that medical education is a **field**, not a discipline

> And from their differences came understanding.
> – Unknown

Joining the medical education community can be both exciting and confusing. Our community is composed of individuals who come from different disciplinary backgrounds – take us as an example: we are a rhetorician (Varpio) and an engineer (Cristancho).

One important aspect to remember about medical education is that it is a field, not a discipline. A *discipline* is usually guided by shared paradigms, assumptions, rules and methods to present their knowledge claims – i.e., people from the same discipline speak the same language. A *field* brings people from multiple disciplines – i.e., multiple paradigms – together. While a *field* can pose the challenge of living in a Tower of Babel[1], that same challenge can become an opportunity. Slowing down and engaging in conversations can provide those opportunities. Our senior colleagues have demonstrated that quality scholarship in medical education is usually the result of thoughtful conversations about differences in perspectives (Albert et al.2007).

Tip 12

Embrace your identity as part of the medical education field

> I am what I am and that's all that I am.
> – Popeye

Finally, embrace your ECME identity. The medical education field has gained recognition as an academic endeavour through the efforts of all those who have accepted the challenge. Research suggests that developing and embracing an ECME identity is problematic (Lieff et al. 2012; Sabel & Archer 2014). We recognize that professional identity formation is complicated and is a life-long endeavor. To help ECME faculty members move from conceiving of their work in medical education as merely an activity, to conceiving themselves as valuable contributors to a community of scholarship, here are some strategies we have found particularly useful:

- Don't apologize for doing the work you do. It is a counterproductive habit particularly when writing grants or addressing scientific audiences.
- Strive for the best quality in your work by explicitly speaking to rigor principles, and cultivating the habit of asking for feedback.

- Be proud of what you do and don't hide your passion for your work.

Concluding comments

Medical education is a vibrant academic field that offers unique opportunities and challenges for early ECME faculty members. Indeed, the first 10 years of a career in medical education can be difficult to navigate. In writing these 12 tips, our goal is to offer some navigational directions that we have found useful as we continue to navigate our own careers.

Disclaimer. The views expressed herein are those of the authors and do not necessarily reflect those of the United States of America's Department of Defense or other federal agencies.

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LARA VARPIO, PhD is an Associate Professor at the Uniformed Services University of the Health Sciences, in Bethesda, MD. Her program of research investigates the many kinds of teams involved in medical education – e.g., inter professional care teams in clinical settings, medical education research and innovation unit teams, and scholarly collaboration teams. She uses qualitative methodologies and methods, along with theories from the social sciences (e.g., Institutional Entrepreneurship, Actor Network Theory, and Cultural Historical Activity Theory) and from the Humanities (e.g., Rhetorical Genre theory, Visual Rhetoric) to develop both practical and theoretical advances in the field.

Acknowledgements

Note

1. A biblical analogy to represent the feeling of being surrounded by people speaking different languages and not being able to understand the words others are using.

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Power And Influence

Informal Networks: The Company Behind the Chart

by David Krackhardt and Jeffrey R. Hanson

Many executives invest considerable resources in restructuring their companies, drawing and redrawing organizational charts only to be disappointed by the results. That's because much of the real work of companies happens despite the formal organization. Often what needs attention is the *informal* organization, the networks of relationships that employees form across functions and divisions to accomplish tasks fast. These informal networks can cut through formal reporting procedures to jump start stalled initiatives and meet extraordinary deadlines. But informal networks can just as easily sabotage companies' best laid plans by blocking communication and fomenting opposition to change unless managers know how to identify and direct them. Learning how to map these social links can help managers harness the real power in their companies and revamp their formal organizations to let the informal ones thrive.

If the formal organization is the skeleton of a company, the informal is the central nervous system driving the collective thought processes, actions, and reactions of its business units. Designed to facilitate standard modes of production, the formal organization is set up to handle easily anticipated problems. But when unexpected problems arise, the informal organization kicks

in. Its complex webs of social ties form every time colleagues communicate and solidify over time into surprisingly stable networks. Highly adaptive, informal networks move diagonally and elliptically, skipping entire functions to get work done.

Managers often pride themselves on understanding how these networks operate. They will readily tell you who confers on technical matters and who discusses office politics over lunch. What's startling is how often they are wrong. Although they may be able to diagram accurately the social links of the five or six people closest to them, their assumptions about employees outside their immediate circle are usually off the mark. Even the most psychologically shrewd managers lack critical information about how employees spend their days and how they feel about their peers. Managers simply can't be everywhere at once, nor can they read people's minds. So they're left to draw conclusions based on superficial observations, without the tools to test their perceptions.

Armed with faulty information, managers often rely on traditional techniques to control these networks. Some managers hope that the authority inherent in their titles will override the power of informal links. Fearful of any groups they can't command, they create rigid rules that will hamper the work of the informal networks. Other managers try to recruit "moles" to provide intelligence. More enlightened managers run focus groups and host retreats to "get in touch" with their employees. But such approaches won't rein in these freewheeling networks, nor will they give managers an accurate picture of what they look like.

Using network analysis, however, managers can translate a myriad of relationship ties into maps that show how the informal organization gets work done. Managers can get a good overall picture by diagramming three types of relationship networks:

- The advice network shows the prominent players in an organization on whom others depend to solve problems and provide technical information.

- The trust network tells which employees share delicate political information and back one another in a crisis.

- The communication network reveals the employees who talk about work-related matters on a regular basis.

Maps of these relationships can help managers understand the networks that once eluded them and leverage these networks to solve organizational problems. Case studies using fictional names, based on companies with which we have worked, show how managers can bring out the strengths in their networks, restructure their formal organizations to complement the informal, and "rewire" faulty networks to work with company goals.

The Steps of Network Analysis

We learned the significance of the informal network 12 years ago while conducting research at a bank that had an 80% turnover rate among its tellers. Interviews revealed that the tellers' reasons for leaving had less to do with the bank's formal organization than with the tellers' relationships to key players in their trust networks. When these players left, others followed in droves.

Much research had already established the influence of central figures in informal networks. Our subsequent studies of public and private companies showed that understanding these networks could increase the influence of managers outside the inner circle. If they learned who wielded power in networks and how various coalitions functioned, they could work with the informal organization to solve problems and improve performance.

Mapping advice networks, our research showed, can uncover the source of political conflicts and failure to achieve strategic objectives. Because these networks show the most influential players in the day-to-day operations of a company, they are useful to examine when a company is considering routine changes. Trust networks often reveal the causes of nonroutine problems such as poor performance by temporary teams. Companies should examine trust networks when implementing a major change or experiencing a crisis. The communication network can help identify gaps in information flow, the inefficient use of resources, and the failure to generate new ideas. They should be examined when productivity is low.

Managers can analyze informal networks in three steps. Step one is conducting a network survey using employee questionnaires. The survey is designed to solicit responses about who talks to whom about work, who trusts whom, and who advises whom on technical matters. It is important to pretest the survey on a small group of employees to see if any questions are ambiguous or meet with resistance. In some companies, for example, employees are comfortable answering questions about friendship; in others, they deem such questions too personal and intrusive. The following are among the questions often asked:

- Whom do you talk to every day?

- Whom do you go to for help or advice at least once a week?

- With one day of training, whose job could you step into?

- Whom would you recruit to support a proposal of yours that could be unpopular?

- Whom would you trust to keep in confidence your concerns about a work-related issue?

Some companies also find it useful to conduct surveys to determine managers' *impressions* of informal networks so that these can be compared with the actual networks revealed by the employee questionnaires. In such surveys, questions are posed like this:

- Whom do you think Steve goes to for work-related advice?

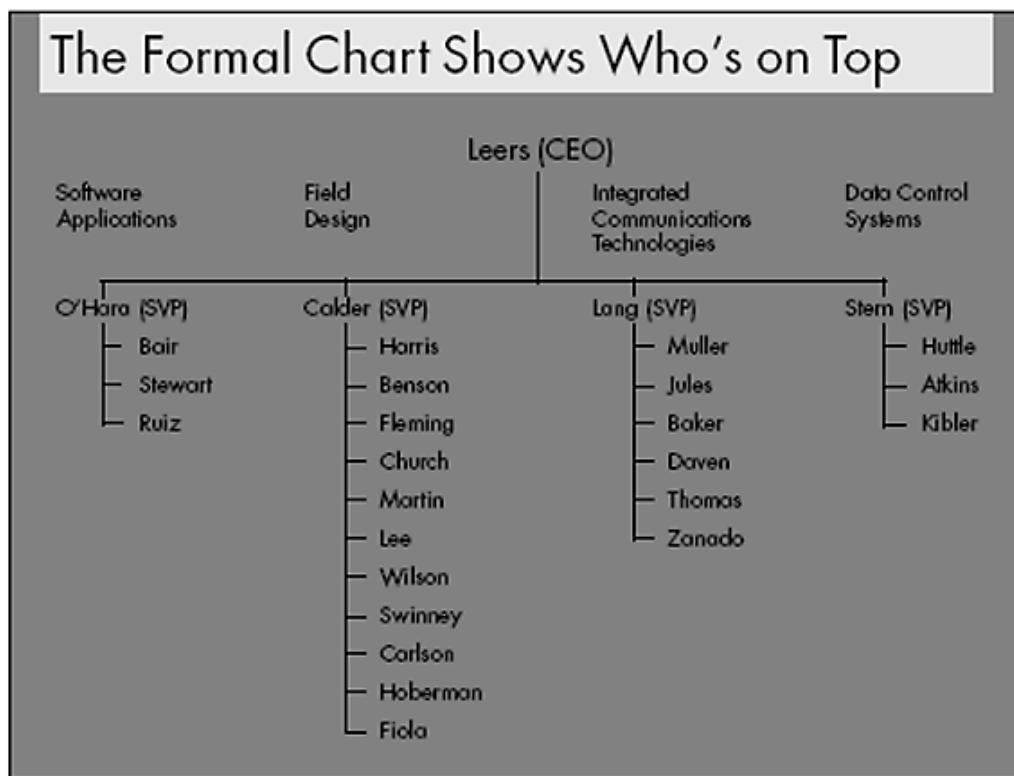- Whom would Susan trust to keep her confidence about work-related concerns?

The key to eliciting honest answers from employees is to earn their trust. They must be assured that managers will not use their answers against them or the employees mentioned in their responses and that their immediate colleagues will not have access to the information. In general, respondents are comfortable if upper-level managers not mentioned in the surveys see the results.

After questionnaires are completed, the second step is cross-checking the answers. Some employees, worried about offending their colleagues, say they talk to *everyone* in the department on a daily basis. If Judy Smith says she regularly talks to Bill Johnson about work, make sure that Johnson says he talks to Smith. Managers should discount any answers not confirmed by both parties. The final map should not be based on the impressions of one employee but on the consensus of the group.

The third step is processing the information using one of several commercially available computer programs that generate detailed network maps. (Drawing maps is a laborious process that tends to result in curved lines that are difficult to read.) Maps in hand, a skilled manager can devise a strategy that plays on the strengths of the informal organization, as David Leers, the founder and CEO of a California-based computer company, found out.

Whom Do You Trust?

David Leers thought he knew his employees well. In 15 years, the company had trained a cadre of loyal professionals who had built a strong regional reputation for delivering customized office information systems (see "The Formal Chart Shows Who's on Top"). The field design group, responsible for designing and installing the systems, generated the largest block of revenues. For years it had been the linchpin of the operation, led by the company's technical superstars, with whom Leers kept in close contact.

The Formal Chart Shows Who's on Top

Leers (CEO)

| Software Applications	Field Design	Integrated Communications Technologies	Data Control Systems
O'Hara (SVP)	Calder (SVP)	Long (SVP)	Stern (SVP)
Bair	Harris	Muller	Huttle
Stewart	Benson	Jules	Atkins
Ruiz	Fleming	Baker	Kibler
	Church	Daven	
	Martin	Thomas	
	Lee	Zanado	
	Wilson		
	Swinney		
	Carlson		
	Hoberman		
	Fiola		

The Formal Chart Shows Who's on Top

But Leers feared that the company was losing its competitive edge by shortchanging its other divisions, such as software applications and integrated communications technologies. When members of field design saw Leers start pumping more money into these divisions, they worried about losing their privileged position. Key employees started voicing dissatisfaction about their compensation, and Leers knew he had the makings of a morale problem that could result in defections.

To persuade employees to support a new direction for the company, Leers decided to involve them in the planning process. He formed a strategic task force composed of members of all divisions and led by a member of field design to signal his continuing commitment to the group. He wanted a leader who had credibility with his peers and was a proven performer. Eight-year company veteran Tom Harris seemed obvious for the job.

Leers was optimistic after the first meeting. Members generated good discussion about key competitive dilemmas. A month later, however, he found that the group had made little progress. Within two months, the group was completely deadlocked by members championing their own agendas. Although a highly effective manager, Leers lacked the necessary distance to identify the source of his problem.

An analysis of the company's trust and advice networks helped him get a clearer picture of the dynamics at work in the task force. The trust map turned out to be most revealing. Task force leader Tom Harris held a central position in the advice network—meaning that many employees relied on him for technical advice (see "The Advice Network Reveals the Experts"). But he had only *one* trust link with a colleague (see "But When It Comes to Trust..."). Leers concluded that Harris's weak position in the trust network was a main reason for the task force's inability to produce results.
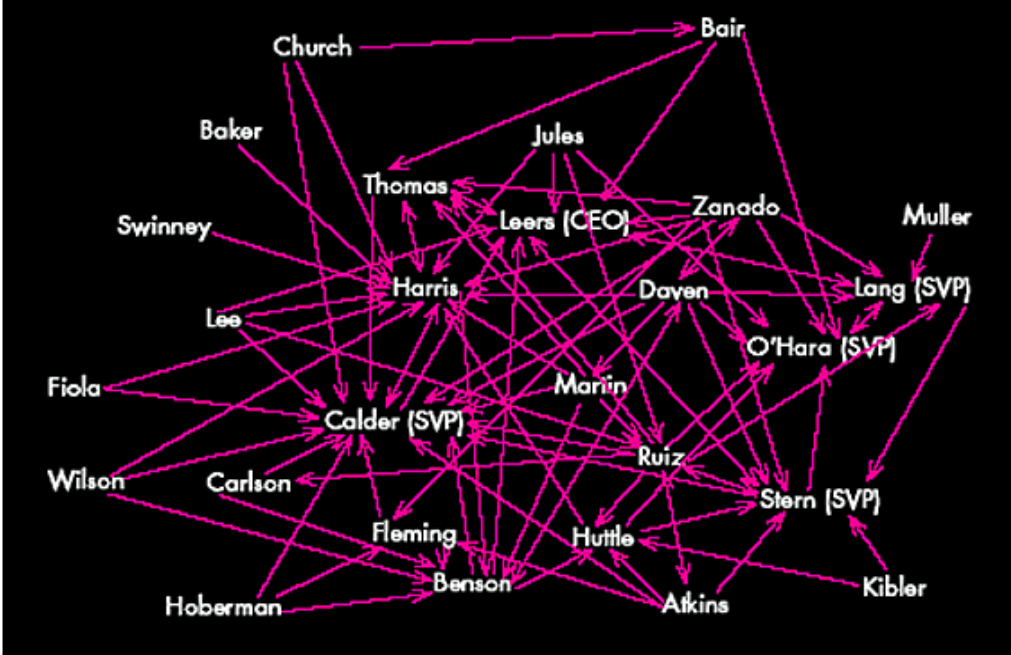
The Advice Network Reveals the Experts
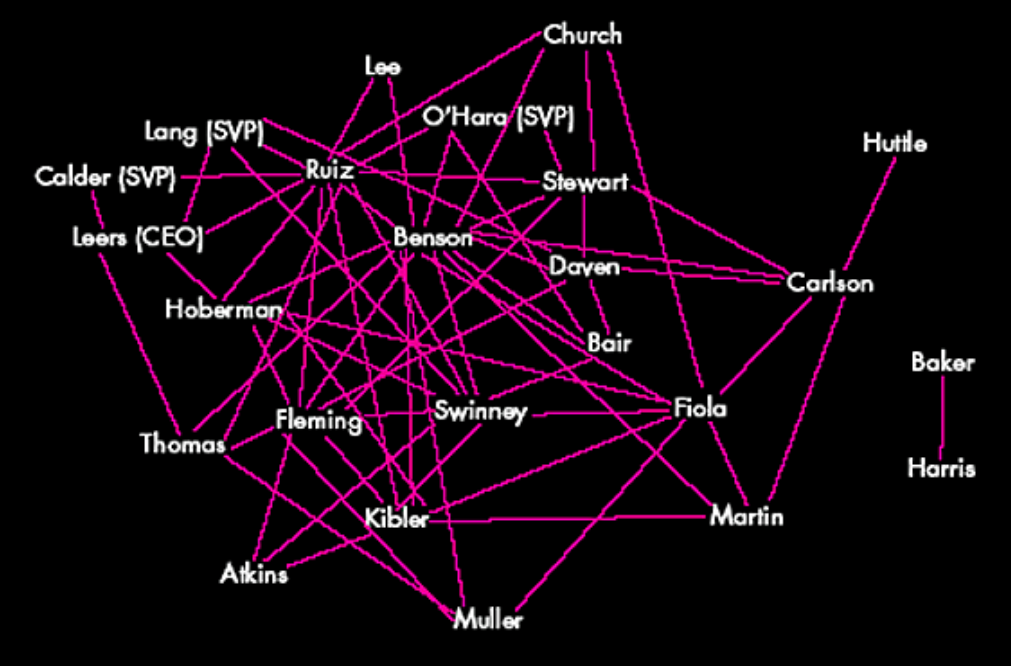
But When It Comes to Trust...

In his job, Harris was able to leverage his position in the advice network to get work done quickly. As a task force leader, however, his technical expertise was less important than his ability to moderate conflicting views, focus the group's thinking, and win the commitment of task force members to mutually agreed-upon strategies. Because he was a loner who took more interest in computer games than in colleagues' opinions, task force members didn't trust him to take their ideas seriously or look out for their interests. So they focused instead on defending their turf.

With this critical piece of information, the CEO crafted a solution. He did not want to undermine the original rationale of the task force by declaring it a failure. Nor did he want to embarrass a valued employee by summarily removing him as task force head. Any response, he concluded, had to run with the natural grain of the informal organization. He decided to redesign the team to reflect the inherent strengths of the trust network.

Referring to the map, Leers looked for someone in the trust network who could share responsibilities with Harris. He chose Bill Benson, a warm, amiable person who occupied a central position in the network and with whom Harris had already established a solid working relationship. He publicly justified his decision to name two task force heads as necessary, given the time pressures and scope of the problem.

Within three weeks, Leers could see changes in the group's dynamics. Because task force members trusted Benson to act in the best interest of the entire group, people talked more openly and let go of their fixed positions. During the next two months, the task force made significant progress in proposing a strategic direction for the company. And in the process of working together, the task force helped integrate the company's divisions.

A further look at the company's advice and trust networks uncovered another serious problem, this time with the head of field design, Jim Calder.

The CEO had appointed Calder manager because his colleagues respected him as the most technically accomplished person in the division. Leers thought Calder would have the professional credibility to lead a diverse group of very specialized design consultants. This is a common practice in professional service organizations: make your best producer the manager. Calder, however, turned out to be a very marginal figure in the trust network. His managerial ability and skills were sorely lacking, which proved to be a deficit that outweighed the positive effects derived from his technical expertise. He regularly told people they were stupid and paid little attention to their professional concerns.

Leers knew that Calder was no diplomat, but he had no idea to what extent the performance and morale of the group were suffering as a result of Calder's tyrannical management style. In fact, a map based on Leers's initial perceptions of the trust network put Calder in a central position (see "How the CEO Views the Trust Network"). Leers took for granted that Calder had good personal relationships with the people on his team. His assumption was not unusual. Frequently, senior managers presume that formal work ties will yield good relationship ties over time, and they assume that if *they* trust someone, others will too.
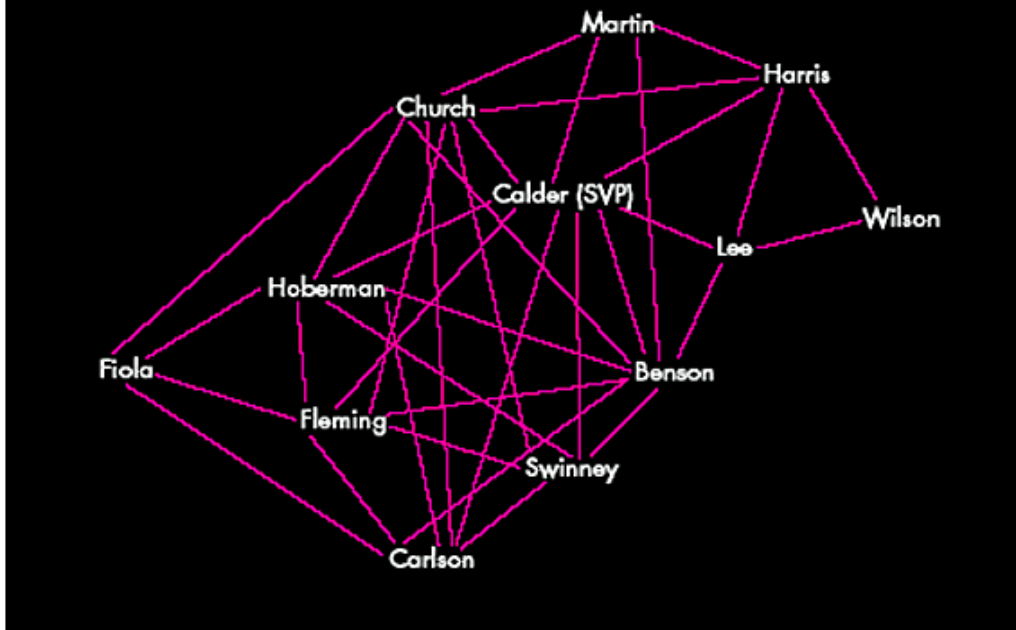
How the CEO Views the Trust Network

The map of Calder's perceptions was also surprising (see "The Trust Network According to Calder"). He saw almost no trust links in his group at all. Calder was oblivious to *any* of the trust dependencies emerging around him—a worrisome characteristic for a manager.

The Trust Network According to Calder

The information in these maps helped Leers formulate a solution. Again, he concluded that he needed to change the formal organization to reflect the structure of the informal network.

Rather than promoting or demoting Calder, Leers cross-promoted him to an elite "special situations team," reporting directly to the CEO. His job involved working with highly sophisticated clients on specialized problems. The position took better advantage of Calder's technical skills and turned out to be good for him socially as well. Calder, Leers learned, hated dealing with formal management responsibilities and the pressure of running a large group.

Leers was now free to promote John Fleming, a tactful, even-tempered employee, to the head of field design. A central player in the trust network, Fleming was also influential in the advice network. The field group's performance improved significantly over the next quarter, and the company was able to create a highly profitable revenue stream through the activities of Calder's new team.

Whom Do You Talk To?

When it comes to communication, more is not always better, as the top management of a large East Coast bank discovered. A survey showed that customers were dissatisfied with the information they were receiving about banking services. Branch managers, top managers realized, were not communicating critical information about available services to tellers. As a result, customers' questions were not answered in a timely fashion.

Management was convinced that more talking among parties would improve customer service and increase profits. A memo was circulated ordering branch managers to "increase communication flow and coordination within and across branches and to make a personal effort to increase the amount and effectiveness of their own interpersonal communications with their staffs."

A study of the communication networks of 24 branches, however, showed the error of this thinking. *More* communication ties did not distinguish the most profitable branches; the *quality* of

communication determined their success. Nonhierarchical branches, those with two-way communication between people of all levels, were 70% more profitable than branches with one-way communication patterns between "superiors" and staff.

The communication networks of two branches located in the same city illustrated this point. Branch 1 had a central figure, a supervisor, with whom many tellers reported communicating about their work on a daily basis. The supervisor confirmed that employees talked to her, but she reported communicating with only half of these tellers about work-related matters by the end of the day. The tellers, we later learned, resented this one-way communication flow. Information they viewed as critical to their success flowed up the organization but not down. They complained that the supervisor was cold and remote and failed to keep them informed. As a result, productivity suffered.

In contrast, Branch 2 had very few one-way communication lines but many mutual, two-way lines. Tellers in this branch said they were well-informed about the normal course of work flow and reported greater satisfaction with their jobs.

After viewing the communication map, top management abandoned the more-is-better strategy and began exploring ways of fostering mutual communication in all the branches. In this case, management did not recast the formal structure of the branches. Instead, it opted to improve relationships within the established framework. The bank sponsored mini-seminars in the branches, in which the problems revealed by the maps were openly discussed. These consciousness-raising sessions spurred many supervisors to communicate more substantive information to tellers. District managers were charged with coming up with their own strategies for improving communication. The bank surveyed employees at regular intervals to see if their supervisors were communicating effectively, and supervisors were informed of the results.

The communication network of a third branch surfaced another management challenge: the branch had divided itself into two distinct groups, each with its own culture and mode of operation. The network map showed that one group had evolved into the "main branch," consisting of tellers, loan officers, and administrative staff. The other group was a kind of "sub-branch," made up primarily of tellers and administrators. It turned out that the sub-branch staff worked during non-peak and Saturday hours, while main-branch employees worked during peak and weekday hours. The two cultures never clashed because they rarely interacted.

The groups might have coexisted peacefully if customers had not begun complaining about the sub-branch. The main-branch staff, they reported, was responsive to their needs, while the sub-branch staff was often indifferent and even rude. Sub-branch employees, it turned out, felt little loyalty to the bank because they didn't feel part of the organization. They were excluded from staff meetings, which were scheduled in the morning, and they had little contact with the branch manager, who worked a normal weekday shift.

The manager, who was embedded in the main branch, was not even aware that this distinct culture existed until he saw the communication network map. His challenge was to unify the two groups. He decided not to revamp the formal structure, nor did he mount a major public-relations campaign to integrate the two cultures, fearing that each group would reject the other because the existing ties among its members were so strong. Instead, he opted for a stealth approach. He exposed people from one group to people from the other in the hopes of expanding the informal network. Although such forced interaction does not guarantee the emergence of stable networks, more contact increases the likelihood that some new ties will stick.

The manager didn't know that there were two distinct cultures in his branch until he saw the communication network map.

Previously planned technical training programs for tellers presented the opportunity to initiate change. The manager altered his original plans for on-site training and opted instead for an off-site facility, even though it was more expensive. He sent mixed groups of sub-branch and main-branch employees to programs to promote gradual, neutral interaction and communication. Then he followed up with a series of selective "staff swaps" whereby he shifted work schedules temporarily. When someone from the main branch called in sick or was about to go on vacation, he elected a substitute from the sub-branch. And he rescheduled staff meetings so that all employees could attend.

This approach helped unify the two cultures, which improved levels of customer satisfaction with the branch as a whole over a six-month period. By increasing his own interaction with the sub-branch, the manager discovered critical information about customers, procedures, and data systems. Without even realizing it, he had been making key decisions based on incomplete data.

Network Holes and Other Problems

As managers become more sophisticated in analyzing their communication networks, they can use them to spot five common configurations. None of these are inherently good or bad, functional or dysfunctional. What matters is the *fit,* whether networks are in sync with company goals. When the two are at odds, managers can attempt to broaden or reshape the informal networks using a variety of tactics.

Imploded relationships.

Communication maps often show departments that have few links to other groups. In these situations, employees in a department spend all their time talking among themselves and neglect to cultivate relationships with the rest of their colleagues. Frequently, in such cases, only the most senior employees have ties with people outside their areas. And they may hoard these contacts by failing to introduce these people to junior colleagues.

To counter this behavior, one manager implemented a mentor system in which senior employees were responsible for introducing their apprentices to people in other groups who could help them do their jobs. Another manager instituted a policy of picking up the tab for "power breakfasts," as long as the employees were from different departments.

Irregular communication patterns.

The opposite pattern can be just as troubling. Sometimes employees communicate only with members of other groups and not among themselves. To foster camaraderie, one manager sponsored seasonal sporting events with members of the "problem group" assigned to the same team. Staff meetings can also be helpful if they're really used to share resources and exchange important information about work.

A lack of cohesion resulting in factionalism suggests a more serious underlying problem that requires bridge building. Initiating discussions among peripheral players in each faction can help uncover the root of the problem and suggest solutions. These parties will be much less resistant to compromise than the faction leaders, who will feel more impassioned about their positions.

Fragile structures.

Sometimes group members communicate only among themselves and with employees in one other division. This can be problematic when the contribution of several areas is necessary to accomplish work quickly and spawn creativity. One insurance company manager, a naturally gregarious fellow, tried to broaden employees' contacts by organizing meetings and cocktail parties for members of several divisions. Whenever possible, he introduced employees he thought should be cultivating working relationships. Because of his warm, easygoing manner, they didn't find his methods intrusive. In fact, they appreciated his personal interest in their careers.

Holes in the network.

A map may reveal obvious network holes, places you would expect to find relationship ties but don't. In a large corporate law firm, for example, a group of litigators was not talking to the firm's criminal lawyers, a state of affairs that startled the senior partner. To begin tackling the problem, the partner posed complex problems to criminal lawyers that only regular consultations with litigators could solve. Again, arranging such interactions will not ensure the formation of enduring relationships, but continuous exposure increases the possibility.

"Bow ties."

Another common trouble spot is the bow tie, a network in which many players are dependent on a single employee but not on each other. Individuals at the center knot of a bow tie have tremendous power and control within the network, much more than would be granted them on a formal organizational chart. If the person at the knot leaves, connections between isolated groups can collapse. If the person remains, organizational processes tend to become rigid and slow, and the individual is often torn between the demands of several groups. To undo such a knot, one manager self-consciously cultivated a stronger relationship with the person

at the center. It took the pressure off the employee, who was no longer a lone operative, and it helped to diffuse some of his power.

In general, managers should help employees develop relationships within the informal structure that will enable them to make valuable contributions to the company. Managers need to guide employees to cultivate the right mix of relationships. Employees can leverage the power of informal relationships by building both strong ties, relationships with a high frequency of interaction, and weak ties, those with a lower frequency. They can call on the latter at key junctures to solve organizational problems and generate new ideas.

Testing the solution.

Managers can anticipate how a strategic decision will affect the informal organization by simulating network maps. This is particularly valuable when a company wants to anticipate reactions to change. A company that wants to form a strategic SWAT team that would remove key employees from the day-to-day operations of a division, for example, can design a map of the area without those players. If removing the central advice person from the network leaves the division with a group of isolates, the manager should reconsider the strategy.

Failure to test solutions can lead to unfortunate results. When the trust network map of a bank showed a loan officer to be an isolate, the manager jumped to the conclusion that the officer was expendable. The manager was convinced that he could replace the employee, a veteran of the company, with a younger, less expensive person who was more of a team player.

What the manager had neglected to consider was how important this officer was to the company's day-to-day operations. He might not have been a prime candidate for a high-level strategy team that demanded excellent social skills, but his expertise, honed by years of experience, would have been impossible to replace. In

addition, he had cultivated a close relationship with the bank's largest client—something an in-house network map would never have revealed. Pictures don't tell the whole story; network maps are just one tool among many.

The most important change for a company to anticipate is a complete overhaul of its formal structure. Too many companies fail to consider how such a restructuring will affect their informal organizations. Managers assume that if a company eliminates layers of bureaucracy, the informal organization will simply adjust. It will adjust all right, but there's no guarantee that it will benefit the company. Managers would do well to consider what type of redesign will play on the inherent strengths of key players and give them the freedom to thrive. Policies should allow all employees easy access to colleagues who can help them carry out tasks quickly and efficiently, regardless of their status or area of jurisdiction.

Experienced network managers who can use maps to identify, leverage, and revamp informal networks will become increasingly valuable as companies continue to flatten and rely on teams. As organizations abandon hierarchical structures, managers will have to rely less on the authority inherent in their title and more on their relationships with players in their informal networks. They will need to focus less on overseeing employees "below" them and more on managing people across functions and disciplines. Understanding relationships will be the key to managerial success.

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Job Roles of the 2025 Medical Educator

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Medical educators recognize that physicians' roles are rapidly changing. The Accreditation Council for Graduate Medical Education's (ACGME's) Sponsoring Institution 2025 (SI2025) initiative identified 3 major driving forces in health care and graduate medical education: democratization, commoditization, and corporatization.[1] Wartman and Combs argued that, as the practice of medicine transforms from the information age to the age of artificial intelligence, the medical community must accept that "devices will, on an increasing scale, outperform humans, cognitively and physically."[2] As educators, we seek to understand these changes and design education to be consistent with the roles of physicians in this future system consistent with a true competency-based approach to education.[3] Job analyses reveal that physicians in 2020 must be competent health care clinicians for patients and populations, superb communicators, fluent with digital data and technology, agile and innovation-driven, and capable as leaders and members of interprofessional teams.[2,4]

Education, like health care, is aggressively changing to include anytime and anywhere adaptive strategies driven by learning analytics, virtual and augmented reality, gamification, and mobile/wearable technologies. Yet, despite the multitude of calls for medical education reform, including the recommendations arising from SI2025, limited attention is focused on what this means for the medical educators who will design, deliver, and assess learners and evaluate our educational programs in 2025. The SI2025 Task Force's competence No. 27 (Accountability for Faculty with Clinical and Educational Responsibilities) focuses on who will be responsible for the development of physicians in these areas, with shifts from medical schools to health care organizations, yet the specific skills and roles of educators in 2025 were not addressed.[1] In addition, while medical educator colleagues have defined competencies for teaching[5] and for clinician educators,[6] a new lens must be added to account for the transformations occurring in education.

To identify the future roles of medical educators, we led an "Educators of the Future—2025 Job Roles" session at the Association of American Medical Colleges (AAMC) 2017 Learn, Serve, Lead meeting. The 90-minute interactive session used the futurist concept of *hard trends*[7] (measurable, predictable facts about transformations in education) and began with a rapidly playing set of screen shots and images of current education trends. Then, the session organizers provided provocative, hard trend–based perspectives on the future of medical education and the roles of the medical educator.

Future Hard Trends in Medical Education

- *Outsourcing of Education:* Textbook publishers have built software platforms where students can do homework exercises and get real-time feedback.[8] Education-oriented partnerships between academics, professional societies, and vendors are increasing. Examples include the Surgery Resident Skills Curriculum[9] developed by the American College of Surgeons and Association of Program Directors in Surgery, the AAMC/Kahn Academy for MCAT Prep, the MedU Cases completed by more than 40 000 students each year,[10] and the in-training examinations and prep courses delivered by specialty/professional societies.

- *Technology:* Virtual and augmented reality technology, combined with built-in learning analytics, are used to create virtual companions that support trainee learning and new forms of real-time assessment.[11,12]

- *Learning Analytics/Big Data in Education:* The use of big "education" data facilitates personalized learning for individuals and groups, as well as use of assessment data for program evaluation. Examples include the ACGME's analysis of milestone data[13] and the emergence of

> **BOX** 2025 Medical Educator Job Roles
>
> **Diagnostic Assessor:** Use results of big data to identify individual/group performance gaps to individualize training
>
> **Content Curator:** Access, select, sequence, and deliver high-quality content developed by national experts
>
> **Technology Adopter:** Be an early adopter and fluent in selecting and using appropriate technology tool(s)
>
> **Learner-Centered Navigator and Professional Coach:** Guide learners' use of resources and practice to achieve identified performance targets
>
> **Clinician Role Model:** Exemplar for the various 2025 physician job roles
>
> **Learning Environment Designer, Engineer, Architect, and Implementer:** Designs the "space" to optimize learning informed by sciences (eg, learning)

conferences highlighting how to analyze and use big data.[14]

- *Learner as Consumer and Co-Designer:* Examples include mobile 24/7 anytime/anywhere learning and testing and micro/nano degrees that allow students to take a series of short online courses, finish a capstone project, obtain a certificate, and prepare for a specific role or job.[15]

- *Regulation and Alignment:* Increasingly, regulators and accreditors will focus on integrating and aligning education and clinical care outcomes (health care quality, safety, patient experience) as the primary driving force for the design of medical education programs across the continuum. There also is increasing emphasis on team/interprofessional collaborative care and education as decisions and actions will no longer be a solo act. Decision-making will be distributed among the team members based on their license and scope of practice, and supported by artificial intelligence/machine learning (eg, Watson).[2]

Identifying Job Roles for the 2025 Medical Educator

The AAMC Annual Meeting brings together a diverse group of medical education stakeholders—clinical and educational leaders, teachers, learners—of various ages, geographic locations, and expertise in education. To take advantage of this diversity of perspectives, the session used small group discussions using experienced medical educators as facilitators. Each facilitator received a preparatory packet in advance. The groups were asked to consider the identified hard trends and to generate key job elements or features of the 2025 Medical Educator. Facilitators reported their group's results with panelists identifying cross-cutting themes to represent the input from 95 participants. Reports and discussions were audiotaped and transcribed for analysis by the authors. Job roles were then sent to facilitators who made clarifying revisions and affirmed the results.

2025 Medical Educator Job Roles

There was general agreement that these are new job roles in response to the changing landscape of health care and medical education. As we transition to these new roles, specialized training will be required, while jobs that exclusively emphasize subject matter expertise will decline. Groups of participants working independently converged on 6 common job roles. While it is unlikely that everyone will have the same degree of competence in each role, every 2025 medical educator will be expected to have basic competence in all 6 roles, which are shown in the BOX and described below.

Diagnostic Assessor

The use of big data in education will continue to grow. This requires educators to identify performance gaps for individuals and groups in order to personalize educational experiences (including competency-based and time-variable training), tailor performance assessments, and evaluate curricula.[16] As diagnostic assessors, educators must be skilled at translating learning and predictive analytic results[5] to actions that optimize learning and performance for individuals, cohorts, groups, and populations.

Content Curator (not Creator)

High-quality content, developed by national experts, is increasingly available across a number of professional organizations and societies, textbook companies, and vendors who contract with experts in the field. Accessing, selecting, sequencing, delivering, and sharing these materials with learners to meet local needs, in real time at the point-of-care, already occurs in several specialties. As curators of content, educators must be skilled in selecting content materials from existing educational materials, and building alliances across stakeholders, including faculty, specialties, professions, accrediting bodies, and professional and interprofessional societies.

Technology Adopter

Since release of the first smart phone in 1992, its effects and that of other technologies have transformed our personal and professional lives. This

technological progress will continue at an exponential rate and presents an opportunity, not a threat, to enhance our work.[17] Medical educators in 2025 must be early adopters, fluent in selecting, using, and assessing the appropriate technology tools. These range from an app to a virtual reality or augmented reality immersion activity. In addition, educators will need to recognize when technology use is misguided or fails.

Learner-Centered Navigator and Professional Coach

Moving from the diagnostic assessment of individual learner performance dashboards to advancing learners' growth and development will require a skilled educational navigator. Medical educators, as learner-centered navigators, will guide the use of resources, materials, and practice opportunities to achieve identified performance targets. As professional coaches, educators must be skilled in face-to-face and virtual facilitation, to provide personalized and group coaching sessions that support learners' accurate construction of meaning.

Clinician Role Model

Role modeling is teaching by example.[18] Medical educators in 2025 must be the exemplars for competence in the various 2025 physician roles. These include individual care provider and leader/member of interprofessional teams, with superb communication skills and professionalism.[4] Additional role-modeling elements will focus on demonstrating humanism,[19] attention to personal well-being,[20] and integrated systems thinking with cross-cutting foundations (eg, quality, patient safety, and lean approaches) as part of clinical and educator competence.[2]

Learning Environment Designer, Engineer, Architect, and Implementer

In 2025, medical educators will be designers of the learning environment. Think of this role as an architect or engineer who designs the "space" to optimize learning. Educators will need to draw on the sciences of human learning, cognition, memory, and implementation to inform their designs. Will the learning environment be a 2025 version of a Google Hangout, a team activity in an augmented reality space with interprofessional trainees, individualized adaptive practice exercises, or a rapid time-lapse quality improvement simulation? Key to this medical educator role is the underlying foundation in learning and implementation sciences.

Implications

As education evolves, medical educators must embrace these role changes and a new professional identity. As noted by Catherine Lucey in her keynote address at the 2017 meeting of the Association for Medical Education in Europe in Helsinki, Finland, "The value of a faculty member can no longer be linked to superior knowledge or skills in all things health care and education."[21] We share Lucey's vision that educators' value will lie in their "wisdom, structured approach to a problem, ability to model ongoing learning, and in their ability to create an environment where every learner is valued and supported to achieve their best."[21]

As good educators, we hope we have left you with more questions than answers: How will we learn these skills? How will we be compensated and rewarded for these new roles? What will be the optimal designs to maximize and streamline learning at minimal costs? As the first to outline the roles of medical educators in 2025, using hard trends to trigger discussion at an international medical education conference, we acknowledge that these are projected roles. We are however certain about 1 thing: the job of the medical educator in 2025 will require new skills, redevelopment and expansion of old skills, and the same commitment to graduating physicians who we will be proud to have care for a loved one.

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Branding and Recruitment: A Primer for Residency Program Leadership

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Residency programs are complex entities with significant diversity in mission, culture, and structure. During the application process, applicants assess these features to determine whether the given program would be a good fit for them. In some specialties, students' self-assessment of program-specific fit is included in personal statements.[1] Without deliberate thought and action on behalf of program leadership, applicants may miss (or misinterpret) important features of a program, resulting in a less precise judgment of fit. Branding, a construct for describing and developing mental associations that influence behavior,[2] may be used by programs to clearly define and effectively communicate their unique features and identity to applicants.

Branding may seem foreign to the domain of resident recruitment, but the focus on program aims as part of the self-study process outlined by the Accreditation Council for Graduate Medical Education (ACGME) has significant overlap with branding, including the consideration of how a program differentiates itself from others.[3] While this area has not been studied empirically, use of branding principles when completing the interrelated activities of self-study and residency recruitment may facilitate improvement in both areas.

In this perspective, we outline the operational elements of branding as adapted from a conceptual framework developed by Botti,[4] provide a rationale for using these concepts in recruitment, and offer advice for initial steps in residency program branding.

Branding Concepts
What Is a Brand?

Kapferer defined a brand as "a sign or set of signs certifying the origin of a product or service and differentiating it from the competition."[2] While a brand is often thought of as simply an entity's reputation, there are many other factors at play. An awareness and understanding of these factors allow

leaders to have greater control in building and maintaining their brand.

There are 5 key elements of branding applicable to residency program recruitment: (1) brand identity; (2) brand image; (3) brand positioning; (4) brand experience; and (5) brand auditing.[4] Each element is described below and further characterized in the FIGURE and the TABLE. Similar to the importance of alignment across elements of curriculum design (eg, goals and objectives, educational strategies, assessments),[5] alignment between the 5 elements of branding is essential to successful branding.

Brand Identity

Brand identity is a construct that incorporates an organization's mission, vision, and values. Applied to a residency program, brand identity is the set of associations that defines a program, differentiates it from others in the specialty, and makes it relevant to specific target groups. Leadership is responsible for reflecting on these constructs and incorporating pertinent concepts (eg, history, current stakeholders and target groups, goals) to develop a strong identity. Brand identity may also incorporate external associations, such as geography, institutional affiliations, and the local community. Establishing a clear identity is the most important step in brand development because it will be used to guide all other branding efforts.

Brand Image

Brand image is the external counterpart to brand identity. Instead of being developed by leadership, brand image is the external perception of the organization (eg, in the case of residency recruitment, what associations are elicited in the minds of applicants when they think about the program). This perception may be influenced by many factors, including messaging from the program, messaging among external parties, or circumstantial factors.

Brand image may be independent of product experience. For example, consumers who have never worn Nike shoes may have opinions about the brand.
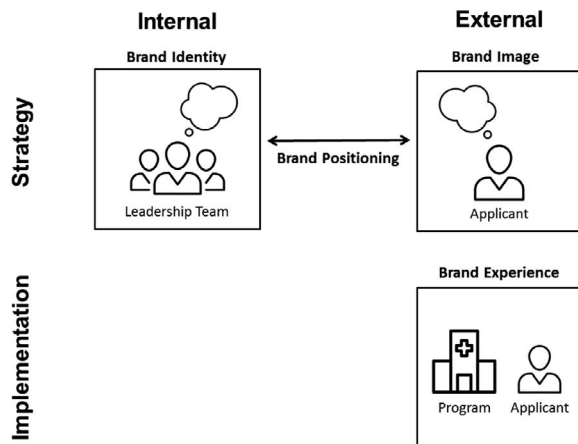
Internal

Brand Identity

External

Brand Image

FIGURE
Branding Conceptual Framework (adapted from Botti[4])

Residency applicants may also hold beliefs about training programs with which they have had no direct experience. Brand image may also be independent of brand identity, and a program may have an image that is not intended by its leaders. For example, an online message board may describe a program's service versus education balance in a way that is far from the view and intention of program leadership.

Brand Positioning

Brand positioning is the deliberate action of leadership to align the views of outside stakeholders with those of local leadership. This process typically "focuses on the product itself,"[2] in contrast to the organization as a whole and may involve drawing comparisons with other products to emphasize the strengths of the given product. For example, a residency program may highlight rotations with underserved populations in an attempt to align applicants' impressions (ie, brand image) with an organizational identity that values service to disadvantaged communities. Brand positioning ensures the alignment between brand identity and brand image.

Brand Experience

Brand experience, described in the framework of Brakus et al, includes the sensory, affective, intellectual, and behavioral impressions of a consumer when using a product or service.[6] For residency programs, product experiences entail visiting students on rotations, applicants interviewing for a position, and residents recruited into the program. Consideration and attendance to each of these factors during the recruitment process will optimize the experience for applicants and matriculants.

Brand Auditing

Brand auditing is the process of reviewing each aspect of a brand and identifying strengths, weaknesses, opportunities, and threats. Brand auditing can be thought of as being similar to curriculum evaluation. Once areas for improvement and threats have been identified, actions can be taken to strengthen alignment among elements.

Why Brand?

The benefits of branding extend far beyond identifying strengths and creating messages around them. A strong brand can shape culture, unify efforts, and align internal and external stakeholders. Through deliberate discussion of the program history and aspirations in the identity development process, a meaningful vision and mission can emerge that truly resonates with faculty and residents. This shared mental model and sense of purpose can positively affect internal and external stakeholders. Branding also can help focus decision-making (eg, does the proposed change strengthen our program's brand?).

In addition, use of a structured framework can help identify gaps in branding efforts. Without critical review, a program with a strong identity may fail to appreciate its brand image—how the program is perceived by an external audience. Another program with good brand positioning may not provide a positive brand experience, by failing to ensure applicants are, for example, physically comfortable (sensory), inspired by opportunities (affective), cognitively engaged (intellectual), and motivated to act (behavioral).

The implications of branding are far-reaching; while the majority of examples provided are in the context of residency recruitment, any individual with relevant resources or influence is an important consumer of the residency program's brand. Examples include alumni who may donate money or time, faculty members who choose their level of engagement, and hospital leaders who make resource allocation decisions. A strong organizational identity that is shared by others and associated with positive experiences can have a positive effect far beyond recruitment.

Getting Started

The first step in residency program branding is performing a brand audit. After an honest assessment of each brand aspect outlined above, ensure the brand identity is appropriate and clear. This identity should then be shared with all representatives of the brand using clear and concise language that is easily reproducible when individuals are referencing the

TABLE
Graduate Medical Education Examples of Branding Elements

Branding Element	Example Problem	Example Intervention
Brand identity	Faculty interviewers have inconsistent descriptions of the program's mission that seem influenced by their areas of expertise (eg, researchers emphasizing the training of scholars, advocacy-oriented faculty emphasizing the training of policy leaders).	The program director arranges a meeting of representative stakeholders to identify a clear program identity including mission and vision statements. Once developed, a message detailing the program's identity (including mission and vision statements) is sent to the faculty and residents and emphasized periodically.
Brand image	A description of the residency program on a popular online message board is 10 y old and laments antiquated program issues. Applicants are noted to ask questions that suggest they still hold these antiquated beliefs.	See "brand positioning" below.
Brand positioning	See "brand image" above.	The program director uses deliberate messaging to address the misperception depicted on the message board. Written materials for applicants (eg, program website, handouts) are updated to address discordant perceptions. Faculty and residents participating in interview days are informed about the misperception and preferred messaging. Finally, the program director includes language in statements to applicants to align perceptions with the current program identity.
Brand experience	The majority of residents staffing the interview day are on a difficult rotation and frequently post overnight when interacting with applicants. The post-Match survey reveals several negative comments regarding residents perceived as "tired" and "beat-down."	Concerns about this aspect of the applicant experience is shared with the residents. In addition, for residents attending interview activities, the program director strategically arranges the schedule to protect as many as possible from overnight duties.
Brand auditing	A new program director has been hired after a national search. While the new director has a brand image associated with the program and institution, she is largely unaware of previous internal perceptions and messaging.	The new program director holds a meeting with representative stakeholders (eg, assistant program directors, core faculty, department chair, and residents) to discuss each element of the program's brand. This process may be initiated and/or revisited in the annual program review.

program. Clarity and simplicity of messages will help with consistency in delivery. Following establishment and dissemination of brand identity, any lack of alignment between branding elements should be assessed and addressed.

Additional recommendations include:

- Write unifying mission and vision statements[7,8]

- Highlight program strengths

- Stay positive in messaging; negative advertising is unprofessional

- Audit the brand regularly

- Embrace the branding process as one that builds morale for the program; an authentic brand makes stakeholders proud, engaged, and connected.

Conclusion

Strong branding can unify a residency program and celebrate its distinctiveness from others in the same specialty. Using this framework, program leaders can apply branding principles to clarify and communicate the program's uniqueness and relevance.

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